MICRO FOCUS

Open Enterprise Server 2018 SP3

iPrint Advanced Administration Guide

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About This Guide

This guide describes how to install, configure, and customize iPrint Advanced on Open Enterprise Server 2018 SP3.

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- Chapter 2, “What’s New in iPrint Advanced,” on page 15
- Chapter 3, “Installing iPrint Advanced Server,” on page 23
- Chapter 4, “Configuring iPrint Advanced Server,” on page 29
- Chapter 5, “Upgrading to iPrint Advanced (OES 2018 SP3),” on page 35
- Chapter 6, “Managing iPrint Advanced,” on page 39
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- Appendix A, “Troubleshooting iPrint Advanced,” on page 85
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- Appendix D, “Advanced Configuration for iPrint Mobile Service (Optional),” on page 95

Audience

This guide is intended for OES administrators, or anyone who is involved in installing and managing iPrint Advanced.

Feedback

We want to hear your comments and suggestions about this manual and the other documentation included with this product. Please use the **comment on this topic** link at the bottom of each page of the online documentation.

Documentation Updates

For the most recent version of the *iPrint Advanced Administration Guide*, visit the Open Enterprise Server Documentation web site.

Additional Documentation

For information about other OES products, see the OES 2018 SP3 Documentation web site.

For information about Micro Focus iPrint, see the OES 2018 SP3: iPrint Administration Guide.

1 Overview

The organizational needs of printing have changed from traditional desktop printing to printing from mobile devices, email-enabled devices, and so on.

All these features and much more are available with Micro Focus iPrint Appliance, a standalone version of iPrint. For more information, see Micro Focus iPrint Appliance Feature Tour.

With iPrint Advanced we are making all of these features available for our OES customers. The existing desktop printing features continues to work with OES iPrint.

The iPrint Advanced service would be running on an iPrint server. Hence, this guide refers the server running the iPrint Advanced service as an iPrint server.

iPrint Advanced along with OES iPrint offers a single, scalable solution for managing all of your printing across multiple office locations from any device. It lets the users print quickly, easily, and more securely. The highlights are:

- **Works with everything:** iPrint provisions print services for nearly every device you have, including desktops, laptops, smart phones, and tablets. It works whether users are printing from Mac or Windows. It works on iOS, and Android.
- **WalkUp printing:** Print jobs sent by the users are put on hold and can be released to a desirable printer.
- **Mobile device printing:** Users of iOS, Android, and Windows mobile devices can download apps that allow them to print from their mobile devices directly to any of your organization's printers.

  iPrint Advanced provides all of the necessary document rendering and conversion.
- **Email print jobs to any iPrint printer:** Any email-enabled device can print to any iPrint printer by sending the print job in the body of the email or as an attachment.
- **Chromebook printing:** Provides secure enterprise print services for Chromebook users.
- **Samsung KNOX certified:** Enhanced security for Android devices while maintaining user-friendly, secure mobile printing in your corporate environment.
- **QR Code Support:** Scan a QR code to quickly connect your mobile device to a specific printer.

For detailed information about the new features, see Chapter 2, “What’s New in iPrint Advanced,” on page 15.

Benefits of iPrint

The following benefits continue from OES iPrint:

Self-service printing: Users can print from their desktops, laptops, or mobile devices without waiting for the help desk to set-up a printer.

From desktops or laptops, users can print by selecting printers on a map using a web browser.

From mobile devices, users can print to any organizational printer using an iPrint app or email.

Expand your horizons: Users can print any time, from anywhere, using almost any device. Click to send a print job to any printer irrespective of the location of the printer.

Simplified enterprise printing: Micro Focus iPrint connects all your organization's workstations and mobile devices to your current printers. iPrint scales exceptionally well, reducing the server infrastructure you need to maintain hundreds or thousands of printers and thus lowering your network bandwidth costs.

Secure printing: You can secure your data before it goes to the printer, provisioning print services based on user, group and container membership.

Works in heterogeneous environments: Saves IT time and money by significantly reducing the management burden required for mixed fleets of Mac or Windows desktops. It works across the major mobile platforms as well, meaning IT only has to manage a single print solution for all your organization's endpoints.

Leverages your current directory service: Micro Focus iPrint makes secure printing easy by integrating its data store with your identity directory. It works with lightweight directory access protocol (LDAP) such as Microsoft Identity.

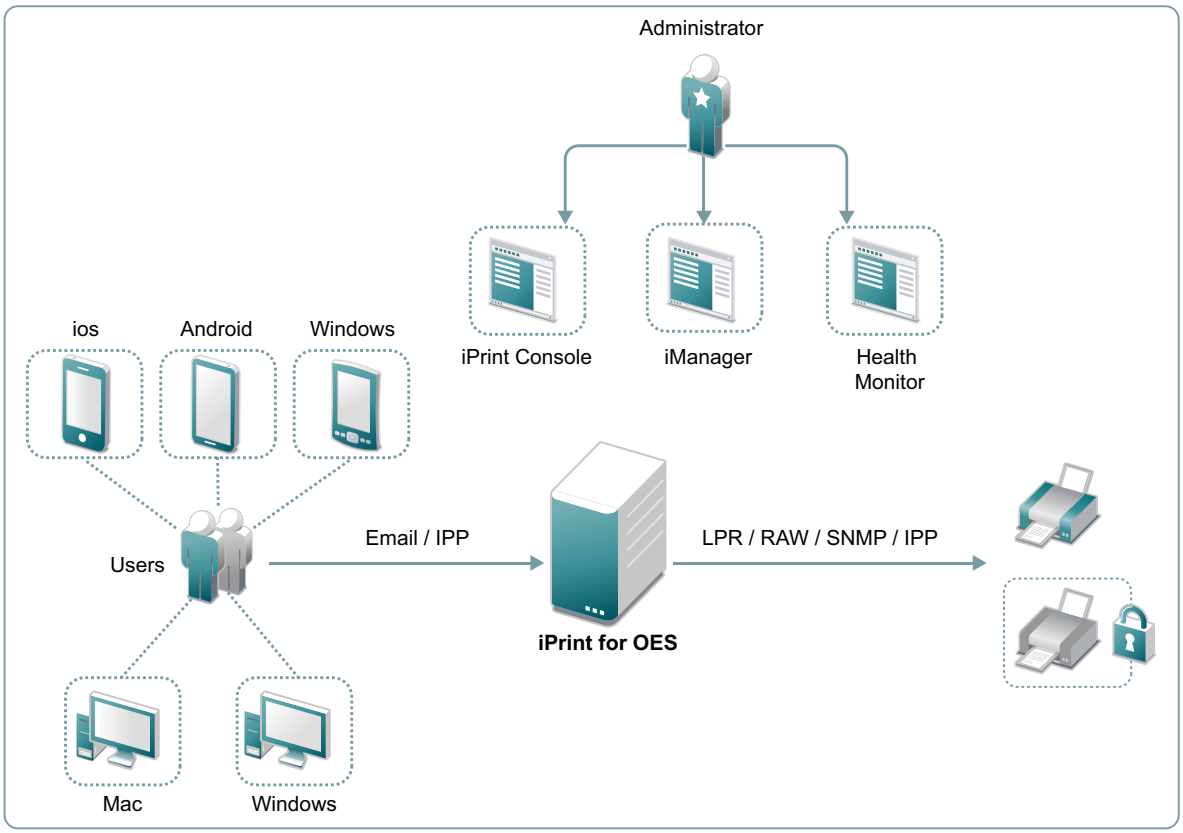
Works with legacy printers: Mobilize your existing fleet of printers rather than buying new. It works with what you have now and what you may want going forward.

Understanding iPrint Advanced

For OES users, `iPrint Advanced` provides the following new features.

Addition	**iPrint Advanced** **(In addition to Micro Focus iPrint, following is available with iPrint Advanced)**
Devices supported	Mobile phones
	Tablets
	Chromebook
Management interfaces	iPrint Console
	iPrint Portal
Printing with	Web-based printing (QuickPrint)
	Mobile apps
	Chromebook
	Email
	WalkUp

Figure 1-1 *Overview*



- “Users” on page 11
- “Devices” on page 11
- “Protocols” on page 12
- “Administration” on page 12
- “Accounting With Third-party Solutions” on page 12
- “Renderers” on page 12
- “Printers” on page 13

Users

Users can submit print jobs from their mobile, email-enabled devices, or Chromebook to both new and legacy printers from all the major print vendors, without worrying about print drivers.

Devices

Supports printing from desktops, laptops, or mobile devices.

Desktops and laptops: Clients for Windows and Mac workstations. Also, supports Chromebook.

Mobile Devices: Apps for iOS, Android devices and Amazon Kindle.

Protocols

IPP: Desktop and mobile apps uses IPP (Internet Printing Protocol) to submit the print job.

IPP/LPR/RAW/SNMP: Supports printer communications using the IPP, Line Printer Remote (LPR), RAW, or SNMP protocols.

Administration

You can add and manage printers, check the printer status, create printer maps, and monitor the iPrint server.

iPrint Console: A new console is available to manage items such as WalkUp printers, mobile printing, email printing, renderers, and so on.

To access iPrint Console, specify `https://<iPrint_Advanced_IP_or_hostname>/ipcon` or `https://<iPrint_Advanced_Cluster Resource IP>/ipcon`.

iPrint Portal: A new printer portal is designed for enhanced user experience.

To access iPrint Portal, specify `https://<iPrint_Advanced_IP_or_hostname>/print`

iManager: Manager allows you to set up and manage your print environment. You can create printers, printer drivers, profiles, and users. A new task as **iPrint Console** is listed in **Roles and Tasks**. For this release, the task only provides information and no functionality is available.

To access iManager, specify `https://<iPrint_Advanced_IP_or_hostname>/nps`

iPrint Health Monitor: Monitors your iPrint environment. You can view status of WalkUp print jobs and generate audit reports that show details of who printed and how much.

To access Health Monitoring tool, specify `https://<iPrint_Advanced_IP_or_hostname>/psmstatus`

iPrint Map Designer: Use this tool to create map displaying the location of printers. Users can identify and install printers that are nearest to their location.

To access Map Designer, specify `https://<iPrint_Advanced_IP_or_hostname>/ippdocs/maptool.htm`

Accounting With Third-party Solutions

`iPrint Advanced` integrates with the third-party print accounting solution to provide support for accounting print jobs sent by email and from mobile devices to the printers.

To install and configure third-party print accounting solution, refer to their documentation.

Renderers

- "Local Renderer" on page 13
- "Remote Renderer" on page 13

Local Renderer

iPrint Advanced is bundled with an in-built document renderer (local renderer). The local renderer converts documents to the PDF format, then converts them to the print ready format. The renderer supports Open Office, Microsoft Office and image formats.

Remote Renderer

iPrint Advanced server also ships with a Remote Renderer. For enhanced desktop-quality printing, you should use Remote Renderer. The remote renderer can be downloaded from the iPrint Console and must be installed on a Windows 64-bit computer.

The remote renderer provides high quality rendering for different formats. It communicates with iPrint server for document conversion. Although, it is not a mandatory requirement, it is recommended for desktop quality printing.

Printers

Users can send print jobs through their devices to both new and legacy printers from all the major print vendors.

Feature List

- **iPrint Advanced:** Allows users to print from their desktops, laptops, and mobile devices.
- **OES iPrint (formerly Novell iPrint):** Allows users to print from their desktops and laptops. As an OES customer you are entitled to use the advanced features provided by iPrint Advanced. However, to avail all these features, you must configure iPrint Advanced and apply the desktop license.

Table 1-1 *Features Available Per License*

Features	iPrint Advanced			OES iPrint
	Desktop License (Entitled)	Enterprise License (Purchase)	Mobile License (Purchase)	OES License
Printing from/with:				
◆ Desktop (Windows and MAC)	✓	✓	✗	✓
◆ Mobile Devices (Android for Work/AppConfig Community Standards)	✗	✓	✓	✗
◆ Chromebook	✓	✓	✓	✗
◆ iPrint Portal (QuickPrint)	✓	✓	✓	✗
Web Printing	✓	✓	✓	✗

Features	iPrint Advanced			OES iPrint
Email Printing				
Release WalkUp Jobs with:				
◆ Mobile Devices				
◆ Release Portal				
◆ Identity Cards				
◆ Identity Cards (Using Advanced Authentication)				
MDM Support (BlackBerry (formerly Good)/MobileIron/Zenworks)				

For more information on applying the license, see “License” on page 56.

2 What's New in iPrint Advanced

- "What's New (Update 1 OES 2018 SP3)" on page 15
- "What's New (OES 2018 SP3)" on page 15
- "What's New (OES 2018 SP2)" on page 16
- "What's New (iPrint for OES 2018 SP1 - Patch1)" on page 16
- "What's New (OES 2018 SP1)" on page 16
- "What's New (OES 2018 - November 2017)" on page 18

What's New (Update 1 OES 2018 SP3)

Support for Standalone With NSS Filesystem

In a Standalone environment, you can host iPrint on an NSS filesystem. For more information, see "Configuring iPrint Advanced Server In a Standalone Environment" on page 29.

iPrint Client and Mobile Operating System

- iPrint Client supports Windows 11 and MAC Monterey.
- iPrint App supports iOS 15.

What's New (OES 2018 SP3)

Support for Azure AD Integration

iPrint users can now be authenticated by using Microsoft Identity platform for secure iPrint printers. This functionality is available with Desktop printing (Windows), QuickPrint, Release Portal, and Context Menu-based Desktop Printing too.

iPrint Client 6.22.10 for Windows

The iPrint Client is upgraded to version 6.22.10 and allows Azure users to print to iPrint secure printers.

iPrint Client 6.15 for Mac

The iPrint Client is upgraded to version 6.15 and supports macOS Big Sur (Intel and Apple M1 architecture).

CUPS Service

A new service file `iprint-cups.service` is added to start the cups binary on iPrint Advanced server with `cupsd-iprint.conf` (iPrint configuration file) file.

The CUPS file (`cups.service`) available with the earlier release is masked and should not be used with the OES 2018 SP3 server.

What's New (OES 2018 SP2)

iPrint Advanced (Earlier iPrint for OES)

Beginning with OES 2018 SP2, `iPrint for OES` is renamed as `iPrint Advanced` and is part of the OES service packages. iPrint Advanced will be available as a pattern in the OES Software screen and is no longer available as a separate add-on product.

Remote Renderer

iPrint Advanced ships with a Remote Renderer. For enhanced desktop-quality printing, you should use Remote Renderer. Download it from the iPrint Console and install on a Windows 64-bit computer.

The Remote Renderer communicates with the iPrint Advanced server for document conversion. For more information, see "Deploying a Remote Renderer" on page 61.

What's New (iPrint for OES 2018 SP1 - Patch1)

Multiple Licenses

Depending on your printing requirements, you can now apply multiple licenses on your iPrint for OES 2018 SP1 server.

Local Renderer

A new local renderer (KeyView) is available with iPrint Appliance 4. KeyView supports high-fidelity and non-native viewing and printing capabilities. It supports over 1000 files formats and performs faster than competing technologies.

What's New (OES 2018 SP1)

Advanced Authentication Support

iPrint for OES integrates with Advanced Authentication framework to release WalkUp jobs. Advanced Authentication is a multi-factor authentication solution that ensures secure printing to the iPrint printers with minimal administration. iPrint for OES can use only Card or combination of a Card and a Smartphone for authentication. For more information, see "Advanced Authentication" on page 54.

Direct PDF Printing

A new parameter `direct_pdf_print` is added to the `iprintmobile.conf` file to support printing of PDF documents on a PDF supported IPP printers. The printer's capabilities are leveraged and there is no dependency on the drivers for rendering the PDF jobs. For more information, see "direct_pdf_print" on page 97.

Desktop Printing

iPrint Client 6.20 for Windows

The iPrint Client is upgraded to version 6.20 and available on Windows 10, Windows 8.x, Windows 7, Windows Vista, Windows Server 2008 R2, Windows Server 2012 R2, and Windows 2016.

Context Menu-based Desktop Printing: With the earlier release an option "iPrint" was added for faster access to print from the context menu. Starting with this release, multiple (up to 15) documents in different formats can be selected for printing at a time. For more information, see "Windows: Context Menu-based Desktop Printing" on page 72.

iPrint Client 6.14 for Mac

The iPrint Client is upgraded to version 6.14 and available on macOS High Sierra (10.13), macOS Sierra (10.12), OS X El Capitan, 10.8 or later versions. For more information, see "Installing the iPrint Client" on page 69.

The iPrint clients can now automatically be updated on MAC workstations. For more information, see "MAC: Automatic Update Notification" on page 74. This feature will be enabled from the next version of the client.

Mobile Apps

Android App

iPrint App is enabled for the shortcut feature. The supported devices are Android 7.1 and above with Android theme. You must do long-press on the iPrint app's launcher icon to display the following actions:

- WalkUp Jobs
- Photos
- Documents
- Camera

iOS App

iPrint App is enabled for the 3D Touch feature. The supported devices are iPhone 6s and above. On the Home screen, press the iPrint icon to display the following actions:

- WalkUp Jobs

- Photos
- Camera

Proxy Server Enhancements for iPrint Mobile App

The Proxy server settings on iPrint for OES can now be pushed to the mobile apps. Alternatively, the mobile app user can also configure a proxy server on the iPrint App. On configuring Proxy, the mobile app sends the request to the proxy server and the proxy server then redirects the requests to the iPrint server. For more information, see “proxy_server_hostname” on page 97.

What’s New (OES 2018 - November 2017)

The highlights are:

- “Release Jobs With Identity Cards” on page 18
- “iPrint Portal” on page 19
- “QuickPrint (Web Printing)” on page 19
- “Desktop Printing” on page 20
- “WalkUp Printing” on page 20
- “Mobile Device Printing” on page 21
- “Printing from Chromebook” on page 21
- “Email Printing” on page 22
- “DSfW Support” on page 22
- “IPP Page” on page 22

Release Jobs With Identity Cards

Swipe to Print

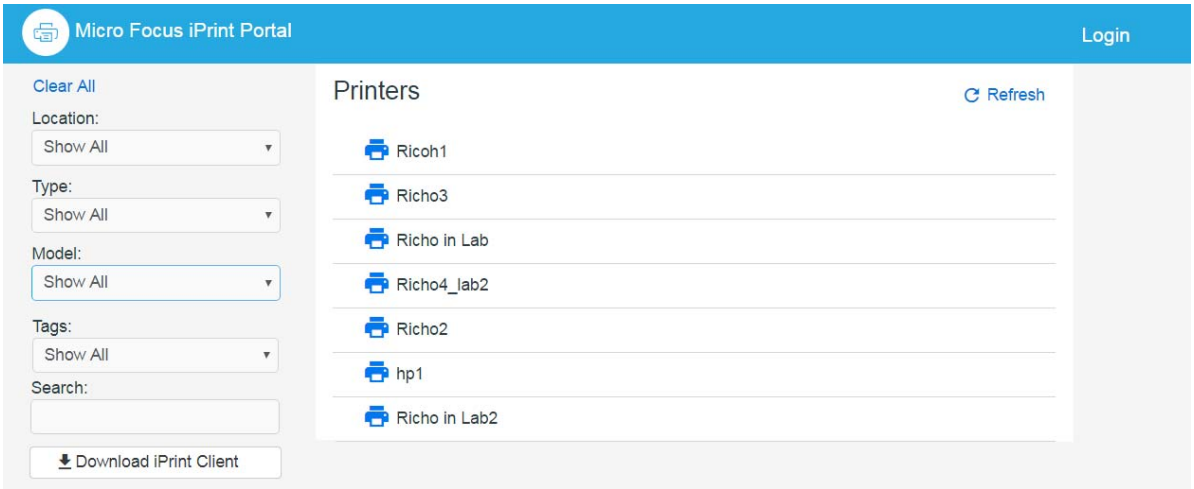
A user prints the WalkUp jobs by using their identity card. A card reader is placed adjacent to the printer and the user swipes his/her identity card to print the jobs. The benefits are:

- **Go Green:** Saves paper, documents are printed only when users are next to the printer
- **Convenience:** All you need is a identity card, no additional logins
- **Simplicity:** It is so easy to print a job, just swipe your identity card

For more information, see “Identity Card Release” on page 52.

iPrint Portal

A new printer portal is designed for enhanced user experience.



Highlights are:

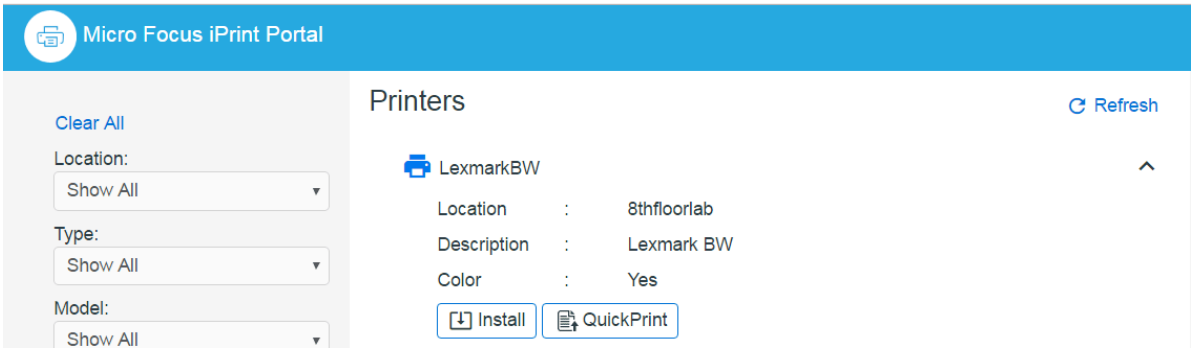
- QuickPrint (Web Printing) to upload and print a document
- Controlled printer visibility
- Quick access (bookmark) to printers based on filters
- Locate printers easily based on location, type, model, and tags of the printers

To access iPrint Portal, specify https://<iPrint_for_OES IP or hostname>/print.

For more information, see “iPrint Portal: Installing Printers” on page 69.

QuickPrint (Web Printing)

QuickPrint is printing documents via Web browser. You no longer require clients or driver installation. Using any web browser, the user selects a printer and document, then prints.



For more information, see “iPrint Portal: QuickPrint” on page 71.

Desktop Printing

iPrint Client 6.11 for Windows

The iPrint Client is upgraded to version 6.11 and available on Windows 10, Windows 8.x, Windows 7, Windows Vista, Windows Server 2008 R2, Windows Server 2012 R2, and Windows 2016.

A new option “iPrint” is added for faster access to print from the context menu. You can print any format without installing printers or drivers on your desktop. For more information, see “Windows: Context Menu-based Desktop Printing” on page 72.

iPrint Client 6.09 for Mac

The iPrint Client is upgraded to version 6.09 and available on macOS High Sierra (10.13), macOS Sierra (10.12), OS X El Capitan, 10.8 or later versions.

WalkUp Printing

WalkUp printing allows users to put print jobs on hold and releases them to a desired printer.

WalkUp is a virtual print queue that includes group of physical printers. The jobs sent to a WalkUp printer are put on hold by the `iPrint for OES` server and can be released to a desirable printer.

Benefits:

- **Flexibility to print from any printer:** Allows users to print documents to any printer. Even if a printer is unavailable, user can select another printer and collect the printout.
- **Simplified User Printing:** User no longer needs to install multiple printers. Installing a single WalkUp printer will allow the user to release documents to multiple printers.
- **Saves Paper:** Many times a user gives print and forgets to collect the documents from the printer. WalkUp printing prevents such accidental and unwanted prints by putting the job on hold and also automatically deletes any dormant jobs. The users can now print or cancel the hold job as per their convenience.
- **Enhanced Security:** Users have to authenticate and then only the documents can be released. This ensures confidentiality of the document is maintained and only the owner collects the document.

For more information about creating and managing WalkUp printer, see “WalkUp Printers” on page 47.

iPrint Release Portal

A web-based portal that allows the users to print jobs (that are on hold) to a desired printer from devices such as mobiles, tablets, laptops, and so on.

The release portal displays the list of jobs that are put on hold, the submission time, and the expiry time of the job.

To launch the Release Portal in a web browser, specify the server address/username (https://*<iPrint for OES server address>*/user).

For more information, see “Release Portal for Users” on page 49.

Mobile Device Printing

Users of iOS, Android, and Windows mobile devices can download the Micro Focus iPrint app from their respective mobile stores. The iPrint app allows you to print from the mobile devices directly to the printers in your organization. The iPrint server includes the necessary document rendering and conversion for printing from mobile devices. Your users can select the printer from a list and adjust all the basic print specifications through a simple touch-screen–friendly interface. The common mobile app benefits are:

- Simplified and intuitive GUI
- Flexibility to print WalkUp jobs and release the jobs when you are near the printer
- Print documents on any iPrint enabled corporate printer and print infrastructure
- Print securely using access restrictions
- Scan a QR code to quickly connect your mobile device to a specific printer

Printing from iPrint iOS App

iPrint provides secure enterprise print services for your iPhone and iPad users. The additional benefit specific to iOS app is:

- Support for managing the iPrint app by using ZENworks Configuration Management 2017 along with few bug fixes. For more information, see “Managing the iPrint App with ZENworks Configuration Management 2017” on page 77.
- Supports printing using the iPrint App extension

Printing from iPrint Android App

iPrint provides secure enterprise print services for Android and Amazon users. The additional benefit specific to Android apps are:

- iPrint app is enabled to support managed configurations (Android for Work). The supported devices are Android 4.0 and later.
- Share document from any application and print using iPrint app
- Print from any application that supports native Android printing

Printing from iPrint Windows App

iPrint provides secure enterprise print services for your Windows phone.

Printing from Chromebook

iPrint extension provides secure enterprise print services for Chromebook users.

- Prints documents to any iPrint-enabled printers, anywhere and anytime.

- Supports on-premises deployment. Data never travels through the cloud.
- You no longer need any cloud service for printing.

You can download the extension from the Chrome Web Store.

Email Printing

Users can print from any email-enabled device by sending an email to iPrint. You can set up a single email address for the organization's printing, or one for each printer.

DSfW Support

iPrint for OES is now supported in a DSfW environment.

IPP Page

The iPrint Portal is modernized with a set of new features like web printing, tags, search capability, and so on.

From this release onwards, the IPP page (`https://<iPrint_for_OES_IP or hostname>/ipp`) is redirected to the iPrint Portal (`https://<iPrint_for_OES_IP or hostname>/print`). If you still prefer to use the traditional IPP page, refer to the TID 7022057.

3 Installing iPrint Advanced Server

This section describes how to install and configure iPrint server.

- "iPrint Advanced RPM Packages" on page 23
- "Planning Your Environment" on page 24
- "Installing iPrint Advanced Server During OES Installation" on page 25

iPrint Advanced RPM Packages

Table 3-1 *iPrint Advanced RPMs*

RPM Name	Description
microfocus-iprint-auth	
microfocus-iprint-dashboard	
microfocus-iprint-telemetry	
novell-iprint-common-utilities	Contains telemetry related scripts and common utilities required for mobility
novell-iprint-mobile	iPrint Mobile server enables printing from mobile devices to existing iPrint Printers (IPP) or LPR printers. It enables client-less and driver-less printing for the Mobile as well as Desktop platforms. It also supports email as a job submission mechanism.
novell-iprint-mobility-welcome	This rpm updates the OES welcome page with a link to connect to iPrint Console.
novell-iprint-portal	A new printer portal is designed for enhanced user experience.
novell-iprint-releaseportal	A web-based portal for releasing of WalkUp jobs.
novell-iprint-webapps	iPrint Console provides management of mobility tasks.
novell-telemetry-client-logger	Client for telemetry
patterns-oes-iprint-advanced	iPrint Advanced pattern
patterns-oes-novell-base	Dependent base components for OES
patterns-oes-novell-edirectory	NetIQ eDirectory services to manage identity and secure access
patterns-oes-novell-iprint	iPrint service rpm
patterns-oes-novell-lum	Dependent base components for OES
patterns-oes-novell-nrm	Dependent base components for OES
patterns-oes-novell-sms	Dependent base components for OES

Planning Your Environment

In addition to OES requirements, ensure to meet the following requirements:

- “Server Requirements” on page 24
- “Remote Renderer Requirements” on page 24
- “iPrint Advanced Desktop License” on page 24

Server Requirements

- **Memory:** 4 GB RAM or higher is recommended.
- **Hard Disk:** 40 GB. This disk stores the configuration details and all the WalkUp jobs. Depending on your usage, decide the space required on the disk.

Remote Renderer Requirements

For desktop quality printing for Microsoft Office and PDF documents, you must install a remote renderer. The minimum requirements are as follows:

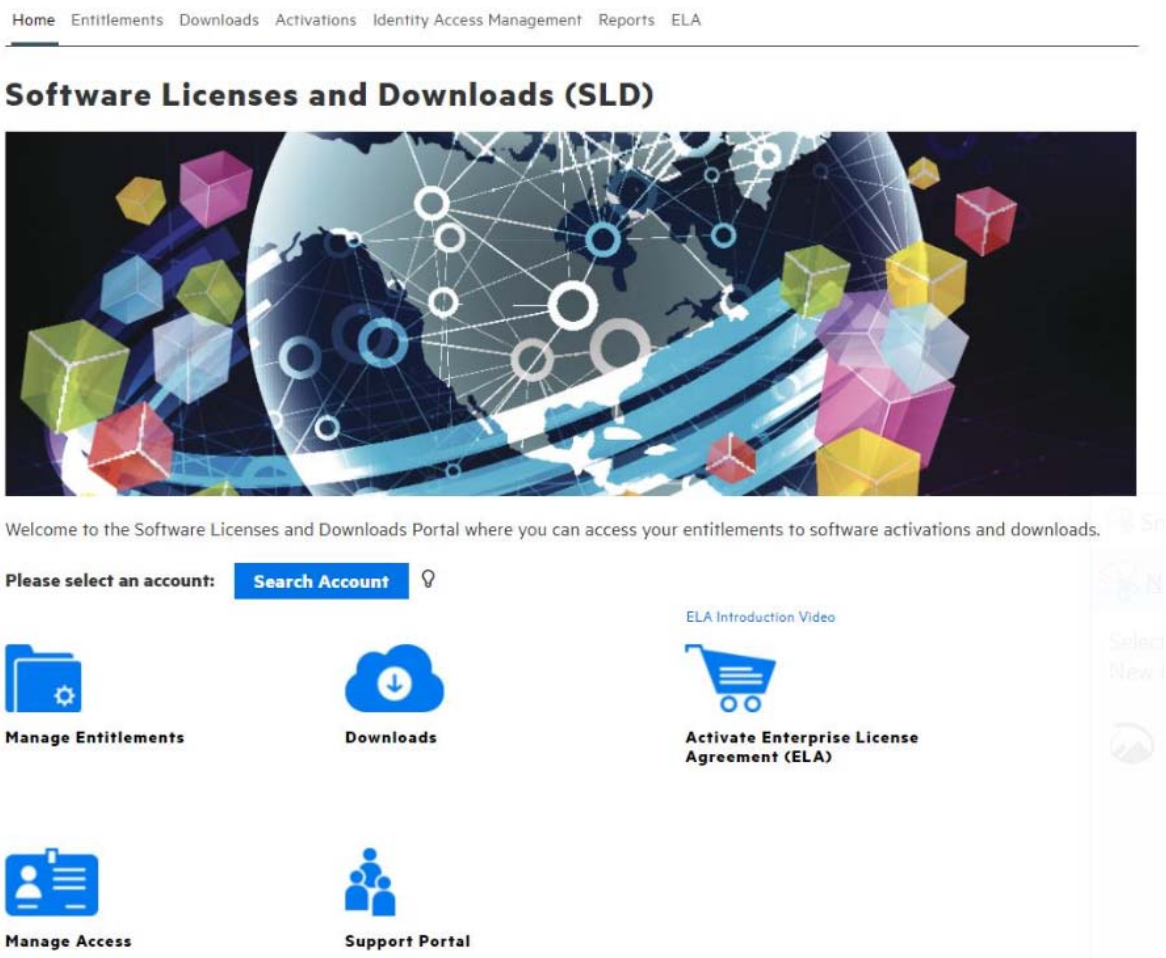
- Install the renderer on a Microsoft Windows 64-bit system.
- Windows 2019/ Windows 10/ Windows 2012 R2/ Windows 2008 R2/ Windows 2008 Enterprise with a dual-core processor or higher.
- Microsoft .Net Framework 4 or later.

For Desktop quality printing, we recommend to install the following optional software:

- Microsoft Office 2013
- Microsoft Office 2010
- Adobe Acrobat XI Professional
- Adobe Acrobat X Pro

iPrint Advanced Desktop License

Login to the Micro Focus Customer Center (SLD).


Home Entitlements Downloads Activations Identity Access Management Reports ELA
Software Licenses and Downloads (SLD)
Welcome to the Software Licenses and Downloads Portal where you can access your entitlements to software activations and downloads.
Please select an account:
Search Account
ELA Introduction Video
Manage Entitlements
Downloads
Activate Enterprise License Agreement (ELA)
Manage Access
Support Portal

License File: Download the `NP-iPrint-Desktop.xml` file. All the OES customers are entitled to use the desktop features under this license. By using iPrint Console, upload the license file to continue using the advanced desktop features provided by `iPrint Advanced`. For more information about licenses, see "License" on page 56.

Installing iPrint Advanced Server During OES Installation

1. From the boot menu, select **Installation** and press enter, then continue with the installation as desired until you get to the Installation Settings page.

   For detailed instructions, see Installing OES 2018 SP3 as a New Installation in the OES 2018 SP3: Installation Guide.

2. On the **Installation Settings** page, click **Software** to open the Software Selection page.

3. Under **Micro Focus Open Enterprise Server**, select **iPrint Advanced**, the **Accept** and continue with the installation process.

   The following additional services are automatically selected:

   - OES iPrint
   - NetIQ eDirectory
   - OES Linux User Management (LUM)

- OES Remote Manager (NRM)
- OES Backup / Storage Management Services (SMS)

4 Restart Mobile service (iPrint Tomcat service):

```
systemctl restart novell-iprint-tomcat.service
```

5 Configure iPrint, for more information, see Setting Up iPrint in the OES 2018 SP3: iPrint Administration Guide.

6 To configure mobility in a cluster environment, continue with "Clustering on a NSS File System" on page 31.

or

In a non-cluster environment, continue with the next step.

7 (Conditional) In a DSfW environment, do the following:

7a Modify the LDAP port parameters in the `/etc/opt/novell/iprintmobile/conf/iprintmobile.conf` as follows:

```
#LDAP Port
ldap_port = 1389

#LDAP Secure Port
ldap_secure_port = 1636
```

7b Restart mobile server:

```
systemctl restart novell-iprint-tomcat.service
```

7c Modify the LDAP parameter in the `/etc/opt/novell/iprintauth/conf/authService.conf` as follows:

```
config.RepositoryLdapUrl = ldaps://localhost:1636
```

7d Restart iprint auth service: `systemctl restart iprint-auth.service`

8 Launch **iPrint Console** in a web browser. You must login to the console the first time to complete the configuration of iPrint Advanced. No additional tasks needs to be performed in the console.

NOTE: Ensure that the Driver Store and Print Manager are running.

Specify https://*<IP Address or host name of iPrint Advanced server>*/ipcon/

8a Specify the name and password of the OES administrator who has rights to manage the print manager.

- If the user is unique in the tree, then use CN to login. For example, admin.
- If there are multiple users with the same name in different containers, then specify FQDN in LDAP format. For example, cn=admin,o=microfocus.

Using iPrint Console, you can manage email and mobile features of the printers.

For more information, see Chapter 6, "Managing iPrint Advanced," on page 39. Each of the page in iPrint Console includes an help icon . The help includes information for enabling the features.

Installing iPrint Advanced After OES and Micro Focus iPrint Installation

Ensure to meet the following specific requirements along with prerequisites for OES 2018 SP3 and iPrint Advanced:

- `iPrint Advanced` runs on OES 2018 SP3 servers. For information about installing and configuring OES 2018 SP3, see OES 2018 SP3: Installation Guide.
- Micro Focus iPrint must be installed and configured on OES 2018 SP3 server. For information about installing and setting up iPrint, see the OES 2018 SP3: iPrint Administration Guide.

On installing OES 2018 SP3 and Micro Focus iPrint, continue with the following steps:

1. To launch YaST, run the command `yast2`.
2. Click **Open Enterprise Server > OES Install and Configuration**.
3. Select the pattern **iPrint Advanced**, then click **Accept**.
4. Continue with on-screen prompts.
5. `iPrint Advanced` is successfully installed.
6. (Conditional) In a DSfW environment, do the following:

   6a Modify the LDAP port parameters in the `/etc/opt/novell/iprintmobile/conf/iprintmobile.conf` as follows:

   ```
   #LDAP Port
   ldap_port = 1389

   #LDAP Secure Port
   ldap_secure_port = 1636
   ```

   6b Restart mobile server:

   ```
   systemctl restart novell-iprint-tomcat.service
   ```

   6c Modify the LDAP parameter in the `/etc/opt/novell/iprintauth/conf/authService.conf` as follows:

   ```
   config.RepositoryLdapUrl = ldaps://localhost:1636
   ```

   6d Restart iprint auth service: `systemctl restart iprint-auth.service`
7. (Conditional) To configure mobility in a cluster environment, continue with the "Clustering on a NSS File System" on page 31.

   or

   In a non-cluster, continue with the next step.
8. Launch iPrint Console in a web browser. You must login to the console the first time to complete the configuration of `iPrint Advanced`. No additional tasks needs to be performed in the console. Using iPrint Console, you can manage email and mobile features of the printers.

NOTE: Ensure that the Driver Store and Print Manager are running.

Specify https://<*IP Address or host name of iPrint Advanced server*>/ipcon/

8a Specify the name and password of the OES administrator who has rights to manage the print manager.

- If the user is unique in the tree, then use CN to login. For example, admin.
- If there are multiple users with the same name in different containers, then specify FQDN in LDAP format. For example, cn=admin,o=microfocus.

For more information, see Chapter 6, “Managing iPrint Advanced,” on page 39. Each of the page in iPrint Console includes an help icon . The help includes information for enabling the features.

4 Configuring iPrint Advanced Server

This section describes how to configure iPrint Advanced server in a Standalone and Cluster environment.

- “Configuring iPrint Advanced Server In a Standalone Environment” on page 29
- “Configuring iPrint Advanced Server In a Cluster Environment” on page 30
- “Patching iPrint Advanced OES 2018 SP3” on page 33

Configuring iPrint Advanced Server In a Standalone Environment

- “Planning for iPrint Advanced Server As a Standalone” on page 29
- “iPrint Advanced Server As a Standalone On an NSS File System” on page 30

Planning for iPrint Advanced Server As a Standalone

- “Open Enterprise Server 2018 SP3” on page 29
- “Micro Focus iPrint” on page 29
- “NSS File System” on page 29

Open Enterprise Server 2018 SP3

The OES 2018 SP3 server must be patched with the latest patch.

Micro Focus iPrint

iPrint is installed. For more information, see Installing and Setting Up iPrint on Your Server in the OES 2018 SP3: iPrint Administration Guide.

NSS File System

Ensure to install and configure NSS, if you are using NSS file system to host iPrint configuration and data on an NSS Volume. For more information, see OES 2018 SP3: NSS File System Administration Guide for Linux.

iPrint Advanced Server As a Standalone On an NSS File System

1. Install `iPrint Advanced` service on an OES server using YaST. For more information, see Installing and Configuring iPrint Services through YaST in the OES 2018 SP3: iPrint Administration Guide.
2. Run the `iprint_nss_relocate` script located at `/opt/novell/iprint/bin` on the OES server. For more details on this script, see Running the iprint_nss_relocate script in the OES 2018 SP3: iPrint Administration Guide.
3. If the `keyviewOutput.txt` file exists in the temp folder, then delete the file using the command `rm/tmp/keyviewOutput.txt`. Deleting this file avoids any failure in job submission.

Configuring iPrint Advanced Server In a Cluster Environment

- "Planning for iPrint Advanced Server in a Cluster" on page 30
- "Clustering on a NSS File System" on page 31

Planning for iPrint Advanced Server in a Cluster

- "Open Enterprise Server 2018 SP3" on page 30
- "OES Cluster Services" on page 30
- "Micro Focus iPrint" on page 30
- "NSS File System" on page 31

Open Enterprise Server 2018 SP3

- The OES 2018 SP3 server must be patched with the latest patch.
- Ensure that each node in the cluster is running the same release version of OES 2018 SP3.

OES Cluster Services

Ensure that each node is running the same release version of OES Cluster Services with the latest patches applied. For information on installing OES Cluster Services, see Installing, Configuring, and Repairing Novell Cluster Services in the OES 2018 SP3: Novell Cluster Services for Linux Administration Guide.

Micro Focus iPrint

iPrint service is configured in a cluster environment on an NSS file system. Ensure that each node in cluster where you plan to install iPrint Advanced, is running with Micro Focus iPrint. For more information, see Configuring iPrint with Novell Cluster Services in the OES 2018 SP3: iPrint Administration Guide.

Driver Store and Print Manager

Ensure Driver Store and Print Manager is running in the cluster environment.

NSS File System

`iPrint Advanced` supports only NSS file system.

Clustering on a NSS File System

1. Identify the node where pool resource is running.
2. Install `iPrint Advanced` service using YaST on the node where the pool resource is running.
3. Identify all the other nodes to host the `iPrint Advanced` service. Install iPrint Advanced service on those nodes.

   IMPORTANT: Ensure `iPrint Advanced` is installed on the node before migrating the pool resource to that node.

   ---

4. Run the `iprint_nss_relocate` script located at `/opt/novell/iprint/bin` on the node where the pool resource is running.

   For more details on this script, see Running the iprint_nss_relocate script.

5. Stop the Mobile and CUPS service by executing the following commands:

   ```
   systemctl stop novell-iprint-tomcat.service
   systemctl stop novell-iprint-license.service
   systemctl stop iprint-cups.service
   systemctl stop iprint-auth.service
   systemctl stop orientdb.service
   ```

6. Migrate the pool resource to the next identified node. For more information, see Cluster Migrating Resources to Different Nodes in the OES 2018 SP3: Novell Cluster Services for Linux Administration Guide.
7. Repeat Step 4 to Step 6 on all the iPrint cluster nodes.
8. Edit the load script (to add Mobile service and CUPS service) for the Cluster Pool. Add the following lines to the existing load script before the `exit 0` statement.

   ```
   exit_on_error systemctl start novell-iprint-ocs.service
   exit_on_error systemctl start novell-iprint-license.service
   exit_on_error systemctl start orientdb.service
   exit_on_error systemctl start iprint-auth.service
   exit_on_error systemctl start iprint-cups.service
   exit_on_error systemctl start novell-iprint-tomcat.service
   ```

   Changes do not take effect until you take the resource offline, and bring it online again.

   For information on editing a load script, see Modifying the Load, Unload, and Monitor Scripts.

9 Edit the unload script (to add Mobile service and CUPS service) for the Cluster Pool. Add the following lines to the existing unload script after the `ignore_error systemctl stop novell-idsd.service` statement:

```
ignore_error systemctl stop novell-iprint-tomcat.service
ignore_error systemctl stop iprint-cups.service
ignore_error systemctl stop iprint-auth.service
ignore_error systemctl stop orientdb.service
ignore_error systemctl stop novell-iprint-license.service
ignore_error systemctl stop novell-iprint-ocs.service
```

For information on editing an unload script, see Modifying the Load, Unload, and Monitor Scripts.

Changes do not take effect until you take the resource offline, and bring it online again.

10 (Conditional) In a DSfW environment, do the following:

10a Modify the LDAP port parameters in the `/etc/opt/novell/iprintmobile/conf/iprintmobile.conf` as follows:

```
#LDAP Port
ldap_port = 1389

#LDAP Secure Port
ldap_secure_port = 1636
```

10b Restart mobile server:

```
systemctl restart novell-iprint-tomcat.service
```

10c Modify the LDAP parameter in the `/etc/opt/novell/iprintauth/conf/authService.conf` as follows:

```
config.RepositoryLdapUrl = ldaps://localhost:1636
```

10d Restart iprint auth service: `systemctl restart iprint-auth.service`

11 To configure mobility, launch iPrint Console in a web browser. Using iPrint Console, you can manage email and mobile features of the printers.

NOTE: Ensure that the Driver Store and Print Manager are running.

---

https://<*Resource_server_ address of iPrint Advanced server*>/ipcon/

11a Specify the name and password of the OES administrator who has rights to manage the print manager.

- If the user is unique in the tree, then use CN to login. For example, admin.
- If there are multiple users with the same name in different containers, then specify FQDN in LDAP format. For example, cn=admin,o=microfocus.

12 If you add a new node to the cluster later, change the file as follows:

12a Install `Micro Focus iPrint` and `iPrint Advanced` on the new node.

12b Comment out the load and unload scripts for the Print Manager, Driver Store, Mobile server, License, and CUPS service.

12c Migrate the resource to the new node.

12d Run the iprint_nss_relocate script on the new node.

12e Remove the comment tag from the load and unload scripts.

Patching iPrint Advanced OES 2018 SP3

Remote Renderer

On applying the latest patch, the `iPrintRendererBundle.zip` file must be manually updated. For the standalone environment, the remote renderer zip file is automatically bundled. But for the cluster environment, before updating the remote renderer zip file, you must manually re-bundle it.

Re-bundling the Remote Render Zip File

Perform the following steps to re-bundle the `iPrintRendererBundle.zip` file.

1. Ensure that every node running iPrint Advanced is patched with the latest patch.
2. Go to `/opt/novell/iprintmobile/bin` folder on the node where the pool resource is running.
3. Run `sh /opt/novell/iprintmobile/bin/certman_oes.sh -b`. The latest remote renderer zip file is re- bundled.

Updating the Remote Render Zip File

On re-bundling the latest remote renderer zip file, download, install, configure and register remote renderer. For more information, see “Downloading the Remote Renderer” on page 64.

5 Upgrading to iPrint Advanced (OES 2018 SP3)

Supported Source Upgrade Paths

- iPrint Advanced on OES 2018 SP2
- iPrint for OES on OES 2018 SP1
- iPrint for OES on OES 2018
- iPrint for OES on OES 2015 SP1

Upgrading to iPrint Advanced on OES 2018 SP3 Server (Standalone)

Follow the step-by-step instructions for upgrading to OES 2018 SP3 server. For more information, see Upgrading to OES 2018 SP3 in the OES 2018 SP3: Installation Guide.

NOTE: Beginning with OES 2018 SP3, a new service file `iprint-cups.service` is added to start the cups binary on iPrint Advanced server with `cupsd-iprint.conf` (iPrint configuration file) file. The CUPS file (`cups.service`) available with the earlier release is masked and should not be used with the OES 2018 SP3 server.

Post- Upgrade

You must complete the following tasks before using `iPrint Advanced`:

1. Log into iPrint Console. Logging into the console ensures that certain background activities required for upgrading iPrint Advanced to OES 2018 SP3 are completed. No additional tasks needs to be performed in the console.

   1a. Specify the name and password of the OES administrator who has permissions to manage the print manager and upload the printer drivers.

   - If the user is unique in the tree, then use CN to login. For example, admin.
   - If there are multiple users with the same name in different containers, then specify FQDN in LDAP format. For example, cn=admin,o=microfocus.

Upgrading to iPrint Advanced on OES 2018 SP3 Server (Cluster)

1. Follow the step-by-step OES 2018 SP3 upgrade instructions. See Upgrading to OES 2018 SP3 in the OES 2018 SP3: Installation Guide.

NOTE: Beginning with OES 2018 SP3, a new service file `iprint-cups.service` is added to start the cups binary on iPrint Advanced server with `cupsd-iprint.conf` (iPrint configuration file) file. The CUPS file (`cups.service`) available with the earlier release is masked and should not be used with the OES 2018 SP3 server.

2 Ensure that the upgraded OES 2018 SP3 node is cluster enabled.

3 Comment the cups service: `exit_on_error systemctl start cups.service`

NOTE: Step 3 is not required when the servers are upgraded from OES2015SP1/OES2018 to OES2018 SP3

4 Migrate the pool resource to the upgraded OES 2018 SP3 node.

5 Ensure that the pool and volume is running on the node running the OES 2018 SP3 server.

6 Run the `iprint_nss_relocate` script located at `/opt/novell/iprint/bin` on the 1st node where the pool resource is running.

For more details on this script, see Running the iprint_nss_relocate script.

7 Stop the Mobile (novell-iprint-tomcat) and License by executing the following commands:

```
systemctl stop novell-iprint-tomcat.service
systemctl stop novell-iprint-license.service
```

8 Edit the load script (to add Mobile, License, and CUPS service) for the Cluster Pool. Add the following lines to the existing load script before the `exit 0` statement.

```
exit_on_error systemctl start novell-idsd.service
exit_on_error systemctl start novell-ipsmd.service
exit_on_error systemctl start novell-iprint-ocs.service
exit_on_error systemctl start novell-iprint-license.service
exit_on_error systemctl start orientdb.service
exit_on_error systemctl start iprint-auth.service
exit_on_error systemctl start iprint-cups.service
exit_on_error systemctl start novell-iprint-tomcat.service
```

NOTE: You must remove the line `ignore_error rcnovell-iprint-mobile start` as it is replaced with license and tomcat services and add `exit_on_error systemctl start iprint-cups.service` as it replaces CUPS service.

Changes do not take effect until you take the resource offline, and bring it online again.

For information on editing a load script, see Modifying the Load, Unload, and Monitor Scripts.

9 Edit the unload script to add the Mobile, License, and CUPS service for the Cluster Pool. Add the following lines to the existing unload script after the `ignore_error systemctl stop novell-ipsmd.service` statement:

```
ignore_error systemctl stop novell-iprint-tomcat.service
ignore_error systemctl stop iprint-cups.service
ignore_error systemctl stop iprint-auth.service
ignore_error systemctl stop orientdb.service
```

```
ignore_error systemctl stop novell-iprint-license.service
ignore_error systemctl stop novell-iprint-ocs.service
ignore_error systemctl stop novell-ipsmd.service
ignore_error systemctl stop novell-idsd.service
```

NOTE: You must remove the line `ignore_error rcnovell-iprint-mobile stop` as it is replaced with license and tomcat services and add `ignore_error systemctl stop iprint-cups.serviceas` it is replaced with CUPS service.

.For information on editing an unload script, see Modifying the Load, Unload, and Monitor Scripts.

Changes do not take effect until you take the resource offline, and bring it online again.

10 Ensure all the services (Print Manager, License, Mobile, and Cups) are up and running. Also, ensure that the Driver Store configured with the Print Manager is running.

```
systemctl status novell-ipsmd.service
systemctl status novell-iprint-license.service
systemctl status novell-iprint-tomcat.service
systemctl status iprint-cups.service
```

11 Log into iPrint Console. Logging into the console ensures that certain background activities required for upgrading iPrint for OES to OES 2018 SP3 on first node are completed. No additional tasks needs to be performed in the console.

11a Specify the name and password of the OES administrator who has rights to manage the print manager.

- If the user is unique in the tree, then use CN to login. For example, admin.
- If there are multiple users with the same name in different containers, then specify FQDN in LDAP format. For example, cn=admin,o=microfocus.

The 1st node is successfully upgraded to `iPrint Advanced`.

12 To upgrade to the next identified nodes in cluster, do the following:

12a Follow Step 1 to Step 5 on all the identified cluster nodes.

12b Run the `iprint_nss_relocate` script located at `/opt/novell/iprint/bin` on the node where the pool resource is running.

For more details on this script, see Running the iprint_nss_relocate script.

12c Stop the Mobile and CUPS service by executing the following commands:

```
systemctl stop novell-iprint-tomcat.service
systemctl stop novell-iprint-license.service
systemctl stop iprint-cups.service
```

12d Changes do not take effect until you take the resource offline, and bring it online again.

12e Login to iPrint Console on successful migration of a node.

6 Managing iPrint Advanced

iPrint Console is used to manage the features provided by `iPrint Advanced`. To access iPrint Console (ipcon), specify either the host name or the IP address of `iPrint Advanced` server and in case of cluster setup, specify the resource IP. For example, https://iprintforoes.example.com/ipcon or https://10.0.0.1/ipcon.

Specify the name and password of the OES administrator who has rights to manage the print manager.

If the user is unique in the tree, then use CN to login. For example, admin

If there are multiple users with the same name in different containers, then specify FQDN in LDAP format. For example, cn=admin,o=microfocus.

On logging in to the iPrint Console, the local Print Manager is selected in the **Connected to** drop-down box. All the data is displayed of the server where the selected Print Manager is running on.

The **Connected to** field displays all the active Print Managers that are configured with `iPrint Advanced`.

iPrint Console allows you to manage the following:

- "Printers" on page 39
- "WalkUp Printers" on page 47
- "Configuration" on page 50
- "Renderers" on page 51
- "Printer Map" on page 52
- "Printer Status" on page 52
- "Identity Card Release" on page 52
- "Identity Sources" on page 53
- "Advanced Authentication" on page 54
- "Product Improvement" on page 55
- "License" on page 56

Printers

Lists all printers managed by the active Print Manager. You can enable a printer for mobile and email printing. Creating and modifying the printer details can only be done by using iManager.

Enabling Mobile Printing

Select a printer or printers, click the **Mobile** menu, then click **Enable**. On enabling the printer for mobile, you can print to that printer from your mobile devices.

When the mobile license expires, the **Mobile** option is disabled and the iPrint features on the mobile device are not available.

Email Printing

Using email printing, you can print documents from any device capable of sending emails. You can print emails by specifying email printing commands in the subject line of the email. You can also print documents by emailing them to your printer as attachments. When configured for email printing, iPrint server becomes a client to an email server.

When you enable email printing, the email address you provide becomes the global print email address. You can also configure a printer for private email printing by providing a specific email address to each printer.

The difference between global email printing and private email printing is:

- **Global Email Printing:** When you enable email printing, you are prompted to specify an email address. This email address is the global print email address. When configured for email printing, iPrint server becomes a client to an email server. The global email account inbox is polled for incoming print jobs, which are then routed to the intended printer.
- **Private Email Printing:** With private email printing, you can assign a specific email address to each printer. When a user sends an email printing request, the print job is sent directly to the printer. Users do not need to specify any print commands in the subject line of the email.

Email printing is not enabled by default. You can enable email printing through the iPrint Console. You must create a unique email address for iPrint server to receive and process print requests. For more information on enabling Email, see “Global Email Settings” on page 50 and “Enabling Private Email Printing” on page 44.

IMPORTANT: If you enable auditing for email print jobs, the email address of the user is logged in the iPrint audit logs. If the same email address is populated for the user object in the LDAP source, then the user FDN is logged instead of email address. This is important if you are using an accounting software to ensure that jobs are tracked or accounted correctly.

- “Enabling Email Printing” on page 40
- “Email Printing Commands” on page 41
- “Printing Using Email” on page 43

Enabling Email Printing

To enable email printing, you must ensure to meet the following:

- Configure global email settings
- Email accounts are created and functional

After configuring the global email settings, do the following:

Select a printer or printers, click the **Email** menu, then click **Enable**.

On enabling the printer for email, you can print to that printer from any device capable of sending emails.

Email Printing Commands

You can print the body of the email and the attachments by using a few simple print commands in the subject line of your email.

- "Basic Print Commands" on page 41
- "Additional Print Commands" on page 42

Basic Print Commands

`help`

Provides information on email printing commands.

`list printers`

To get the names of the available printers, send an email to the iPrint server address (for example, iprint@example.com) with the subject line `list printers`.

`print printer=<printer_name>`

Prints your email and its attachments to the specified printer. For example, `print printer=hp#Test Mail`.

If you print to a specific printer by using the printer's email address, the `print printer` command is ignored.

`hold printer=<printer_name>`

Queues your email along with its attachments and sends you the job ID as acknowledgment.

`resume`

Resumes the printing of a job that you put on hold. There are two ways to print a job on hold:

- Send an email with subject `resume` followed by the job ID. For example, `resume 10`
- Send an email with the original subject line prefixed with `resume`. For example, `resume#Test Mail`

`cancel`

Cancels a job that you put on hold. There are two ways to cancel a job on hold:

- Send an email with subject `cancel` followed by the job ID. For example, `cancel 10`
- Send an email with the original subject line prefixed with `cancel`. For example, `cancel#Test Mail`

`status`

Displays the status of a job. There are two ways to check the status of a job:

- Send an email with subject `status` followed by the job ID. For example, `status 10`
- Send an email with the original subject line prefixed with `status`. For example, `status#Test Mail`

move

Moves a job to a new printer. There are two ways to move a job to a new printer:

- Send an email with subject `move`, the job ID, and the name of the new printer. For example, `move 10 printer=<PrinterName>`
- Send an email with the original subject line prefixed with `move`, the name of the new printer, and #. For example, `move printer=<PrinterName>#Test Mail`

list jobs

Lists the details of the held jobs.

default printer

Displays the default printer.

default printer=<PrinterName>

Sets a particular printer as your default printer. After you set the default printer, you do not need to include the printer name while printing to the default printer. You only need to use the `print` command followed by the email subject. For example, `print#Test Mail`.

Note

- If a printer name contains spaces, enclose the printer name within double (") or single (') quotes. For example, `print printer='HP PRINTER'`.
- To separate the email subject from the command, use #. For example, `print printer=hp#Test Mail`.

Additional Print Commands

In addition to the basic print commands listed above, you can use these commands to refine your printing:

portrait [portrait=yes/portrait=y (or) portrait=no/portrait=n]

Prints your email content in portrait orientation. For example, `print printer=hp portrait=y#Test Mail`

landscape [landscape=yes/landscape=y (or) landscape=no/landscape=n]

Prints your email content in landscape orientation. For example, `print printer=hp landscape=y#Test Mail`

color [color=yes/color=y (or) color=no/color=n]

Prints your email content in color. For example, `print printer=hp landscape=y color=y#Test Mail`.

pages

Prints a given range of pages in your email. For example, the command `print printer=hp landscape=y color=y pages=1-3#Test Mail` prints pages 1, 2, and 3.

copies

Prints the specified number of copies of your email and its attachments. For example, the command `print printer=hp landscape=y color=y pages=1-3 copies=5#Test Mail` prints 5 copies of pages 1, 2, and 3.

duplex [duplex=yes/duplex=y (or) duplex=no/duplex=n]

Prints your email and its attachments on both sides of the printing paper. For example, the command `print printer=hp landscape=y color=y pages=1-3 copies=5 duplex=y#TestMail` prints 5 copies of pages 1, 2, and 3 in duplex mode.

media

Prints your email and its attachments with the specified paper type. The default paper type is "LETTER." You can change the default paper type by using the iPrint Console. The other available print paper types are A3, A4, and other common paper types. For example, the command `print printer=hp landscape=y color=y pages=1-3 copies=5 duplex=y media=A3#Test Mail` prints 5 copies of pages 1, 2, and 3 in duplex mode, on an A3 size paper.

mailbody [mailbody=yes/mailbody=y (or) mailbody=no/mailbody=n]

Prints either your email and its attachments or only the attachments from your email without the email body. For example, using the command print `printer=hp landscape=y color=y mailbody=n#Test Mail` prints only the email attachments in landscape mode.

NOTE: If you do not specify any of the additional commands, your print job is carried out according to the default preferences set by your administrator.

IMPORTANT: When printing to a specific printer using the printer's private email address, you do not need to specify the printer's name in the command. You can also leave the subject line empty. Printing is carried out according to the default print options set by the administrator.

However, you must specify the print command in the following scenarios:

- The administrator changes the `subject_optional_for_printer_specific_emails` to `False` in the configuration file located at `/etc/opt/novell/iprintmobile/conf/iprintmobile.conf`.
- If you want to customize the print options, you must specify the `print` command, along with the required print options. For example, `print landscape=y color=y pages=1-3 copies=5 duplex=y media=A3#Test Mail`.

Printing Using Email

Using email printing, you can print documents from any device capable of sending emails. You can print emails by specifying email printing commands in the subject line of the email. You can also print documents by emailing them to your printer as attachments.

Ensure to meet the following prerequisites:

- iPrint server is configured with global or private email address. For example, iprint@example.com
- The users are provided with the configured email address
- List of printers configured for email printing

Perform the following steps to print using email:

1. Open an email. You can use any email mail box.
2. In the **To** field, specify the configured email address. For example, iprint@example.com
3. In the **Subject** field, specify the commands from the "Email Printing Commands" on page 41 section.

   For example,

   - To print from a printer named printer1, `print printer=printer1`
   - To view list of printers that are available to print, list printers
   - To view the list of commands, `help`
4. Specify the information to print in the body of the message or add an attachment to print.
5. Click **Send**.

   The document is printed and a confirmation message is received in the mail box.

Enabling Private Email Printing

You can configure a printer for private email printing by providing an unique email address for each printer.

To enable private email printing, you must ensure to meet the following:

- Configure global email settings
- Email accounts are created and functional

To enable a private email address for the printer, do the following:

1. Select a printer, click the **Configure** menu, then click **Printer Email Settings**.
2. Specify the values as follows:

Account	• **Email Address:** Specify the full email address of the mailbox to be polled for the print jobs. When an email-based job arrives, the print job is processed to the printer. For example, print@example.com. The email address must be unique for every server. • **Username:** Specify the user name to be used by iPrint server to log in to the email server to access the private printer email account. For example, john. • **Password:** Specify the password for iPrint server to log in to the email server to access the private printer email account.

Server	◆ **Incoming Mail Server:** Specify the address of the incoming email server for the email account. For example, imap.example.com. ◆ **Incoming Mail Server Port:** Specify the port of the incoming email server for the email account. ◆ **Outgoing Mail Server:** Specify the address of the outgoing email server for the email account. For example, smtp.example.com. ◆ **Outgoing Mail Server Port:** Specify the port of the outgoing email server for the email account. ◆ **Access Method:** iPrint server supports two different protocols to poll for incoming print jobs. Select POP or IMAP depending on the protocol your email server supports.

Caveats For Email Printing

- An email address used for a particular printer (per-printer email configuration) should not be used for any other printer or service.
- Secure printers cannot be configured for email printing.

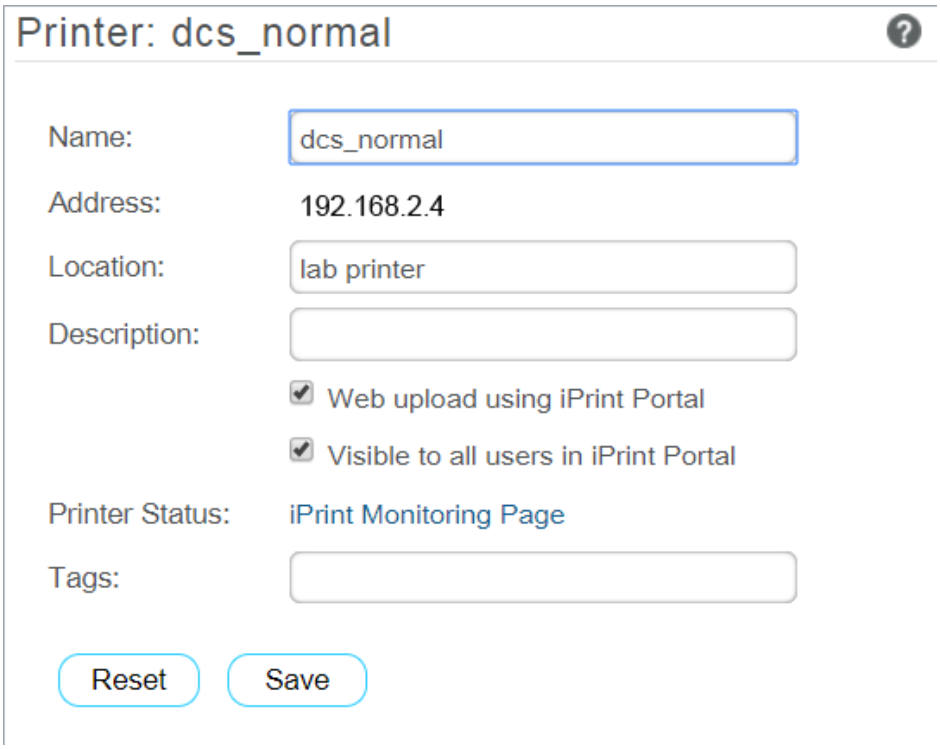
Printer Rename and Printer Refresh

Select a printer, you want to rename, click the **Configure** menu, then click **Rename Printer**.

To refresh the printers list, click the **Refresh** button in the upper right corner of the window.

Editing a Printer

1 To view and modify the details of a printer, click the printer name.



2 You can modify the details as follows:

- **Name:** Displays the name of the printer.
- **Address:** Displays the IP address or host name of the printer.
- **Location:** (Optional) Local location of the printer.
- **Description:** (Optional) Specific description related to the printer.
- **Web upload using iPrint Portal:** This option enables the QuickPrint button in the iPrint Portal. Using any web browser, the user selects a file and prints. The user no longer requires client or driver installations.
- **Visible to all users in iPrint Portal:** By default, all printers are listed in iPrint Portal when a user is not logged in. If you want to hide some printers from the user who is not-logged in, then you can deselect this option.
- **Printer Status:** Displays the Health monitoring GUI to monitor the printer status.
- **Tags:** Specify a label for the printer. Multiple printers can be grouped under same label. In the iPrint Portal, it will be easier for the users to find a specific set of printers. For example, if you specify a tag as Color Printer. In the iPrint Portal, a user can easily locate specific printers by selecting the Color Printer tag.

3 Click **Save**.

WalkUp Printers

WalkUp printer is a virtual print queue that includes group of physical printers. The print jobs sent to the WalkUp printer are put on hold by the iPrint server and released to a desirable printer. The jobs can be released through Release Portal or mobile app.

You must associate drivers for printers when performing desktop printing.

- "Prerequisites" on page 47
- "Creating a WalkUp Printer" on page 47
- "Editing a WalkUp Printer" on page 48
- "Deleting a WalkUp Printer" on page 48
- "Enabling Mobile Printing For a WalkUp Printer" on page 48
- "Modifying the Job Hold Time" on page 48
- "Caveats for Implementing WalkUp Printing" on page 49
- "Release Portal for Users" on page 49

Prerequisites

- Ensure that the physical printers are available before creating a WalkUp printer.
- Ensure there is enough disk space to store the WalkUp jobs.
- The users releases the jobs by using a Release Portal or a mobile app. Ensure that the user is aware of the printer location and printer names.

Creating a WalkUp Printer

The user that has logged in to the iPrint Console must have rights to create the WalkUp printer object. The WalkUp printer object is created in the active Print Manager container.

1. Click **New**.
2. Specify the name of the WalkUp (virtual) printer. This name is exposed to the user when they install printers on their desktop or mobile devices.
3. (Optional) Specify description for the printer.
4. To enable mobile users to use this printer, select **Mobile Printing**.
5. By default, the **Web upload using iPrint Portal** option is enabled. This enables the QuickPrint feature in the iPrint Portal and user can print files using any web browser. The user no longer requires client or driver installations.
6. By default, the **Visible to all users in iPrint Portal** option is enabled. This option lists all the printers in iPrint Portal. If you want to hide some printers from the user who is not-logged in, then you can deselect this option.
7. From the list of printers, select the printers to group under WalkUp printer. The jobs sent to the WalkUp printer are put on hold and the user has control to release those jobs to one of the grouped printer.

   You must select at least one printer.
8. Click **Next**.

9 Assign platform-specific drivers for the WalkUp printer.

If Windows drivers are selected, then bi-directional communication can be set for the WalkUp printer.

9a Specify the IP Address or host name from the pool of printers that you have selected for WalkUp.

10 Click **Finish**.

WalkUp printer object is created that includes group of printers. The jobs on hold can only be released to these printers.

Editing a WalkUp Printer

1 Click the printer name.

Displays the details of the printer and its drivers.

2 In the **Printer Details** tab, modify the details of the printer.

3 Click the **Drivers** tab, then reassign the drivers for the selected printers. You can also modify the IP address or host name for bi-di communication.

4 Click **Save**.

The modified settings are applicable to all jobs sent to the selected WalkUp printer.

Deleting a WalkUp Printer

Ensure all the jobs are completed before deleting the printer. On deleting this printer, all the held jobs will be automatically canceled.

Select a printer or printers, then click **Delete**.

Enabling Mobile Printing For a WalkUp Printer

Select a printer or printers, click the **Mobile** drop-down menu, then click **Enable**.

Modifying the Job Hold Time

By default, the job is put on hold for four hours, after which the job is canceled. You can modify the time duration to put the job on hold as follows:

1 Click **Settings**.

2 Modify the duration to hold a job. This change is applicable only for the jobs put on hold after the setting is modified. The existing jobs will continue to be on hold as per the earlier set duration.

Caveats for Implementing WalkUp Printing

This section lists a few pointers for avoiding common WalkUp implementation problems.

- **Using iManager:** The following management tasks for the WalkUp printer are only managed by iManager:
  - Enable auto driver or profile update
  - Assign driver profiles
  - Set Access Control
  - Enable auditing
  - Delete held jobs
- **Using iPrint status (iPrint Health Monitoring page):** The following tasks of the WalkUp printers are monitored using the iPrint Health Monitoring tool:
  - Delete held jobs
  - Enable auditing
- **Job hold time:** By default, the job is put on hold for four hours, after which the job is canceled. If a job is canceled it is no longer available in the Release Portal. The job hold time can be modified from the Management Console. For more information, see "Modifying the Job Hold Time" on page 48.
- **Insufficient balance when printing in PaperCut setup:** If the user prints in spite of having insufficient balance in his account, the job is canceled even though the Release Portal displays a success message.

Release Portal for Users

The iPrint Release Portal displays the jobs that are put on hold, the time the job was submitted to the WalkUp printer, and the expiry time of the job. By default, the job is put on hold for four hours, after which the job will be canceled. If a job is canceled it is no longer available in the Release Portal.

To launch the Release Portal in a web browser, specify the iPrint server's address (<https://*<iPrint Advanced server address>*/user> or <https://**<iPrint Advanced server address>**/release-portal).

Printing a WalkUp Job

1. Using a web browser, specify the server address (https://<iPrint Advanced server address>/user) or (https://<iPrint Advanced server address>/release-portal).
2. Specify the user authentication details.

   On successful authentication, jobs are displayed.
3. Select the document, then click **Print**.
4. Select the printer, then click **OK**.

   The document is printed by the selected printer.

Deleting a WalkUp Job

1. Using a web browser, specify the server address (https://<iPrint Advanced server address>/user) or (https://<iPrint Advanced server address>/release-portal).
2. Specify the user authentication details.

   On successful authentication, jobs are displayed.
3. Select the document or multiple documents, then click **Delete**.

   The selected jobs are deleted and no longer available to print.

Configuration

You can configure the default print options for mobile, email, and Chromebook printing.

Global Settings

Following are the default settings for all the printers when printing from the mobile, email, and Chromebook. When printing, these settings can be modified for an individual printer.

Paper Size: Select **Letter** or **A4**.

Orientation: Select between **Landscape** or **Portrait** printing.

Enable Duplex Printing: Duplex printing allows printing on both the sides of a paper. Printers without this capability can only print on a single side of paper (simplex printing).

Enable Color Printing: Color printing prints the documents in color, as opposed to monochrome (black and white) printing.

Global Email Settings

You can configure iPrint server to accept the print jobs through email messages and attachments. Using email printing, you can print documents from any device capable of sending emails. You can print emails by specifying email printing commands in the subject line of the email. You can also print documents by emailing them to your printer as attachments. When configured for email printing, iPrint server becomes a client to an email server. Email account inbox is polled for incoming print jobs, which are routed to the intended printer.

Ensure email accounts are created and functional prior to their association with the iPrint server.

Enable email-based printing: Select this option to enable email printing. A global email address is assigned for all the printers.

The following fields are used by iPrint server to describe and access the global email account:

Email address: Specify the full email address for global print jobs. For example, print@example.com. The email address must be unique for every server.

iPrint server polls the inbox of this email address looking for print jobs. When an email-based job arrives, the subject line is parsed to determine the printer to which the job is sent.

IMPORTANT: Do not use an existing email account. If an existing email account is used, the mails in that account might get deleted, auto-replied, and so on.

Account Username: Specify the user name for iPrint server to log in to the email server to access the global email account. For example, john.

Account Password: Specify the password for iPrint server to log in to the email server to access the global email account.

NOTE: When you are modifying the global email settings, ensure to provide the account password. An error occurs if password is not provided.

Incoming Mail Server: Specify the address of the incoming mail server for the email account. For example, imap.example.com.

Incoming Mail Server Port: Specify the port number of the incoming mail server for the email account.

Incoming Server Type: iPrint server supports POP and IMAP protocols to poll for incoming print jobs. Select POP or IMAP depending on the protocol that your email server supports.

Outgoing (SMTP) Mail Server: Specify the address of the outgoing mail server for the email account. For example, smtp.example.com. iPrint server uses the SMTP protocol to send email back to users who submit email-based print jobs to report their job status. In order to support iPrint server, the email server you select must support the SMTP protocol.

Outgoing (SMTP) Mail Server Port: Specify the port of the outgoing mail server for the email account.

Message body Printing: With email-based printing, attachments are always printed. This option allows the email message body to also be printed. It is enabled by default.

Polling Interval: Specify the interval (in seconds) at which emails are fetched from the mail servers.

IMPORTANT: When using email printing, the print command in the subject line might trigger spam filters. To avoid this issue, configure your email system to allow print-specific emails. Include the approved print users in the spam filter of your email system to prevent unwanted print requests.

You can also configure a printer for private email printing by providing an email address to each printer.

Renderers

This page allows you to download the remote renderer and also manage all the renderers. For managing the renderers, see “Managing the Remote Renderer” on page 67.

Printer Map

You can create a printer map using the iPrint Map Designer tool. Click **Printer Map** to launch iPrint Map Designer. For more information, see Creating Maps with iPrint Map Designer in the OES 2018 SP3: iPrint Linux Administration Guide.

Printer Status

This page displays a global view of your print system. The tool displays the current status of Printer Agents, and lets you configure settings and generate reports about your print system.

For more information about the iPrint Printer Status tool, see the .

Identity Card Release

A user can now print the WalkUp jobs by using their identity card. A card reader is placed adjacent to the printer and the user swipes his/her identity card to print the jobs.

1. The administrator configures the Ethernet 241 switch and card reader.
2. The card reader is attached to the printer.
3. The user prints to a WalkUp queue and job is put on hold.
4. The user swipes his/her identity card on the card reader.
5. The `iPrint Advanced` server validates the user credentials.
6. All the jobs in the WalkUp queue submitted by the user for that printer are printed.

`iPrint Advanced` works with RF IDeas Ethernet 241 devices. For more information on supported card types, see the RF IDeas product page.

How to Configure Identity Cards for iPrint Advanced

You must configure the `iPrint Advanced` server to allow the release of WalkUp jobs by using the identity cards:

1. Configure the Card (Ethernet 241) devices as per the instructions of the vendor.
2. Launch the **Ethernet 241 Web portal** (http://<ethernet241 device's IP)
   - **2a** In **Server's** tab, specify the **Data Server IP** as the iPrint Advanced IP
   - **2b** The **Data Server URl** as the iPrint Advanced URL (http://hostname or IP of iPrint Advanced)
   - **2c** In the **Data Server Str**, specify the exact value given below:

     ```
     /iprint/users/
     release?csn=$1&mac=$2&luid=$3&seq=$4&ip=$5&devmac=$6&devip=$7&rdr=$
     8&fwver=$9
     ```

   - **2d** Click on **Update** to configure the device with the details of iPrint Advanced.

3 Launch **iPrint Console** and in the Identity Card Release page, specify the following details:

3a **Enter the attribute names that are mapped with the user's identity cards:** Specify the attribute that maps the user to their identity card. When releasing the WalkUp job, iPrint Advanced maps this attribute to the attribute specified in eDirectory and on receiving the user details, authenticates the user. On successful authentication, the jobs are released.

3b **(Optional) Search Context for Users:** Specify the context to search the user object.The OES Common Proxy user will be given `Compare` rights on this context to read the card attributes for all the users.

If no context is specified, the users are searched in the complete tree. This will take longer time to return the user objects.

Search Subtree: Select whether you want to search for users in containers below the specified DN (that is, in subtrees).

3c **Release WalkUp jobs only with identity cards:** Select this option to release the WalkUp jobs only by using the identity cards. On enabling this option, WalkUp jobs cannot be released using the Mobile App or Release Portal.

Identity Sources

Configure Azure Active Directory (Azure AD) users to print jobs by using iPrint application.

Configuring Microsoft Identity Source

Ensure all the prerequisites are met before configuring Microsoft Identity in the iPrint Console.

Option, Field, or Button	Information and/or Action
Directory (tenant) ID	Specify the unique identifier generated for iPrint in the Azure AD portal.
Application (client) ID	Specify the identifier that is set up as an application in the directory instance.
Client Secret	Specify the secret key value that will be used when communicating with Azure AD server.
API Scope	Specify the scope, so you can provide permissions-based access to iPrint resources to authorized users and client apps that access your API.
New Group	Create a group called IPRINT_ACCESS_GROUP and add AzureAD Users/Groups to that group.
Save	Click this to save your changes.
Delete	Click this to delete to configured Azure server.

Advanced Authentication

iPrint Advanced supports Advanced Authentication for the users releasing the WalkUp jobs. Only Card or combination of a Card and a Smartphone is used for multi-factor authentication. The Smartphone method is used for authentication through your Smartphone that uses an app to perform the out-of-band authentication. The authentication method must be in order of Card and Smartphone. We do not support only Smartphone or changing the order to Smarphone and Card.

For more information about using the Advanced Authentication Framework, see the Advanced Authentication - Administration documentation website.

The following steps describe the authentication flow for Card and a Smartphone authentication:

1. To release a print job, when a user swipes the identity card, the authentication request is initiated and iPrint Advanced contacts the Advanced Authentication server.
2. The Advanced Authentication server validates the user's card data.
3. After validating the data, the Advanced Authentication server sends a push message to the user's Smartphone to inform that an authentication request has been initiated.
4. When the user opens the Smartphone app, the app reaches the Advanced Authentication server to validate if there is an authentication needed. The authentication is indicated by the **Accept** and **Reject** options. The user's selection is then sent to the server.
5. The server validates the authentication and iPrint Advanced releases all the print jobs of the user for that printer.

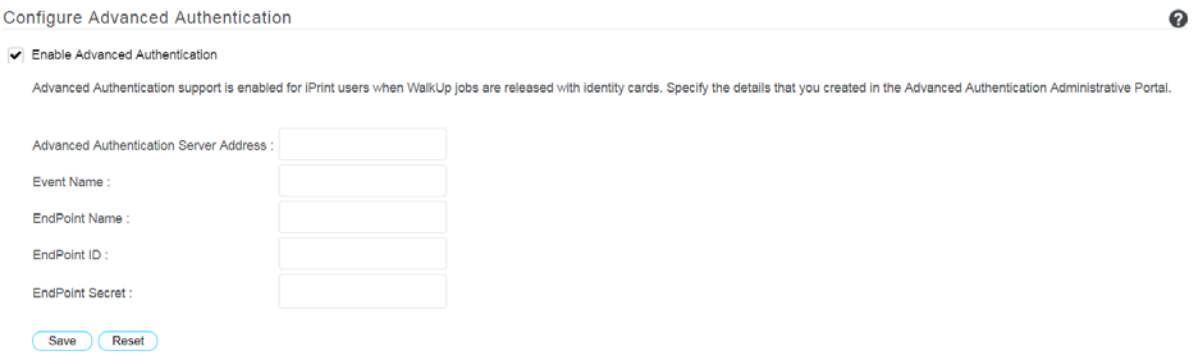
Prerequisites

- Ensure that the iPrint Advanced users are available in the Advanced Authentication server. If the users are not available on both the servers, authentication will fail.
- Configure the Advanced Authentication server with the following:
  - Authentication Chain with the authentication method as Card and Smartphone or only Card
  - Authentication Event with the event type as Generic
  - Endpoint with type as Other

  NOTE: Ensure that a Owner is not set for the Endpoint that is configured for the iPrint Advanced.
- Endpoint ID and Endpoint Secret should be available before configuring Advanced Authentication in the iPrint Management Console

Configuring Advanced Authentication

Ensure all the prerequisites are met before configuring Advanced Authentication in the iPrint Management Console.


Configure Advanced Authentication
Enable Advanced Authentication
Advanced Authentication support is enabled for iPrint users when WalkUp jobs are released with identity cards. Specify the details that you created in the Advanced Authentication Administrative Portal.
Advanced Authentication Server Address :
Event Name :
EndPoint Name :
EndPoint ID :
EndPoint Secret :
Save
Reset

Enable Advanced Authentication: Select this to enable advanced authentication for iPrint users when releasing the WalkUp jobs by using their identity cards.

Option, Field, or Button	Information and/or Action
Advanced Authentication Server Address	The hostname or IP address of the Advanced Authentication server that you want to use for authentication.
Event Name	Specify the name that you created in the Advanced Authentication Administrative Portal. If inaccurate name is provided, the users will be unable to release their WalkUp jobs.
Endpoint Name	Specify the name that you created in the Advanced Authentication Administrative Portal.
Endpoint ID	Specify the value that is automatically generated when you use the Advanced Authentication Administrative Portal to create a Endpoint. You can copy the ID from the portal and paste it here.
Endpoint Secret	Specify the value that is automatically generated when you use the Advanced Authentication Administrative Portal to create a Endpoint. You can copy the secret key from the portal and paste it here.
Save	Click this to save your changes.
Reset	Click this to clear the changes you have made.

Product Improvement

Micro Focus collects statistical data about your usage of iPrint service. This data enables us to ensure that you have the best possible experience with Micro Focus iPrint. Weekly once the data is sent to the Micro Focus server.

Data That is Collected for Product Improvement

Table 6-1 *Telemetry Attributes*

Telemetry Attribute	Description
azure configured	Indicates whether azure ad configured or not
cluster	Indicates the server is cluster or not
Total Printers	Number of printers configured for iPrint
Mobile Enabled Printers	Number of printers that are enabled for mobile
eDirectory Users	Number of users in your eDirectory
Secure Printers	Number of printers that are secure
WalkUp Printers	Number of iPrint printers configured for WalkUp functionality
Mobile Enabled WalkUp Printers	Number of WalkUp printers that are enabled for mobile
WalkUp Job Hold Duration (Minutes)	Job hold time for all WalkUp jobs
Global Email Configured	Displays if a global email was configured for printers
Private Email Configured For Printers	Number of printers configured with private email
Direct Printers	Number of direct printers
Audit Enabled Printers	Number of printers enabled for auditing
Accounting Enabled Printers	Number of printers enabled for accounting
IPP Enabled Printers	Number of printers enabled for IPP protocol
LPR Enabled Printers	Number of printers enabled for LPR protocol

How Server Receives the Data

After the weekly collection, the data is sent to the iPrint server. If the transfer is unsuccessful, the system attempts to send it again during the next weekly cycle. No attempts to send the data is made outside of the weekly cycles.

The data is not encrypted because no sensitive or identifying information is included.

License

This page displays information about license such as the product id, date it was issued, expiry details, and so on.

`iPrint Advanced` ships with a 90-day trial license. The type of licenses are:

- Trial License
- Enterprise License

- Desktop License
- Mobile License

Trial License This is a 90-day license to evaluate the advanced features of desktop and the features on the mobile devices.

Enterprise License This license provides printing from Desktop, Mobile devices, and any email-enabled devices.

The major features offered are WalkUp, Identity Card release, and QuickPrint (Web printing). An iPrint extension is also available to print from Chromebook.

Desktop License The desktop features are:

- Print from Desktop (Windows and Mac)
- Print from Chromebook
- Email printing
- WalkUp printing from desktop
- Release WalkUp jobs from browser
- Release WalkUp jobs from mobile apps

It is recommended that you apply the desktop license. On expiry of the trial license, the entitled desktop features will stop working, however, Micro Focus iPrint desktop features will continue to work uninterruptedly.

Mobile License This license provides printing from mobile devices.

You can obtain a new license key from Micro Focus Customer Center (NCC).

Updating the iPrint License

Apply multiple licenses, overwrite the existing license, or delete a license.

1. Browse and select a valid license (.xml) file to upload.
2. Click **Upload**.

   After copying the license file, iPrint server is updated. Restarting of the services is not required.

Replacing existing license file: Browse and upload a new license (.xml) file to overwrite the existing license file.

Upload additional license file: This option is available to apply an addition license (.xml). This functionality helps applying multiple licenses.

7 Document Rendering

iPrint provides a client-independent and driverless printing environment to mobile users.

- "Overview" on page 59
- "Key Features" on page 60
- "Deploying a Remote Renderer" on page 61
- "Using Secure Remote Renderer When Upgraded From OES 2015 SP1 or Earlier Versions" on page 66
- "Managing the Remote Renderer" on page 67

Overview

What Is a Renderer?

iPrint now supports printing from mobile devices that have limited abilities to convert documents into print-ready formats. On desktop platforms, the documents are usually converted to print-ready formats by the application, driver, and the spooler subsystems. This functionality is primitive or non-existent in many of the mobile devices and hence must be provided by the Print Service. To facilitate this, iPrint now provides Rendering and Conversion capabilities in the product and can convert and render most of the documents that are submitted by a mobile device, email, or other submission methods.

This conversion (rendering) is performed on the iPrint Advanced server using our built-in solution known as Local Renderer. Printing quality varies, depending on the document complexity so for enhanced desktop-quality printing, you can use the Remote Renderer on a Windows platform.

You can view the Local renderer and list of remote renderers in the **iPrint Console > Administration > Renderers**.

The renderers support broad range of document formats. For more information, see "Supported Document Formats By the Local Renderer and Remote Renderer" on page 91.

Local Renderer

iPrint Advanced server is bundled with a built-in document renderer known as Local Renderer. The renderer converts documents to the PDF format, and then converts them to the print-ready format using CUPS. The renderer supports multiple formats, has a multithreading feature, and provides limited support for Microsoft Office formats. If a printer does not have a driver associated with it, the default printer driver PostScript is automatically used to print documents.

Remote Renderer

iPrint Advanced server also ships with a Remote Renderer. For enhanced desktop-quality printing, you can use the Remote Renderer. The remote renderer can be downloaded from the iPrint Console and installed on a Windows 64-bit computer.

The remote renderer provides high quality rendering for different formats. The remote renderer job might take some additional time to complete the print jobs in comparison to the local renderer. If you do not want to use the built-in PDF renderer, you can also install Adobe Acrobat Pro for PDF rendering. However, if you are printing PDF using a built-in pdf renderer, then there can be some minor print quality differences such as color shade difference in the PDFs.

The remote renderer communicates with iPrint server for document conversion. Although, it is not a mandatory requirement, the remote renderer is recommended for desktop quality printing.

Key Features

- "Multi-driver Support" on page 60
- "Secure and Non-secure Communication Support (Remote Renderer)" on page 60
- "Automatic Printer Driver Updates" on page 61
- "Printer Rename and Redirection (Remote Renderer)" on page 61

Multi-driver Support

You can configure the local and remote renderer to use multiple drivers for different mobile enabled printer agents. The renderer installs the unique drivers associated with various mobile enabled printer agents, on the renderer machine. During the rendering of jobs, the correct printer driver is selected based on the printer agent to which the job is being submitted for rendering.

If a printer agent does not have any driver associated with the renderer platform, the renderer uses the default driver for rendering the jobs sent to those printer agents. You can select a default driver when adding a renderer from the iPrint Console. Also, an option to change the default drivers is available.

For information on how to upload drivers to the Driver Store, see Managing Printer Drivers in the OES 2018 SP3: iPrint Administration Guide.

Secure and Non-secure Communication Support (Remote Renderer)

The remote renderer can communicate over secure and non-secure channels with the iPrint server. By default, the iPrint Advanced server is set to communicate in non-secure modes.

Secure Communication Mode: When this mode is used, only the secure remote renderers can communicate with the iPrint server.

Non-secure Communication Mode: When this mode is used, both secure and non-secure remote renderers can communicate with the iPrint server.

You can verify the mode of the renderer in the **Renderers** page under the **Secure Mode** column.

- If the **Secure Mode** column displays **false**, then the renderer is in a non-secure communication mode.
- If the **Secure Mode** column displays **true**, then the renderer is in a secure communication mode.

Automatic Printer Driver Updates

The local and remote renderer supports the Automatic Driver Update feature. When a printer driver is updated on the Drive Store, or if the association of a particular printer agent is changed, the driver is automatically updated on the renderer.

Local Renderer: All the jobs submitted for printing is rendered by the driver that is currently associated with the printer. However, the first print job that is sent for printing after the driver association change may take some time to be rendered depending on the size of the driver.

Remote Renderer: All the jobs submitted for printing is rendered by the driver that is currently associated with the printer. However, the first print job that is sent for printing after the driver association change may take some time to be rendered depending on the size of the driver. This is because the remote renderer installs the driver first and then processes it for rendering.

Printer Rename and Redirection (Remote Renderer)

If a printer is renamed or redirected through the iPrint Console, the remote renderer automatically updates its Advanced server to associate the correct printer drivers with the printer.

When you redirect a printer, the printer driver associated with the destination printer is used for rendering.

Deploying a Remote Renderer

For desktop quality printing for Microsoft Office and PDF documents, you must install a remote renderer on a Microsoft Windows 64-bit system.

Before installing and configuring the remote renderer, ensure that you have met the requirements listed in “Remote Renderer Requirements” on page 24.

NOTE: If you have upgraded to OES 2018 SP2 or later from OES 2015 SP1 or earlier server, then you need to perform additional steps before using the remote renderer in a secure mode. For more information, see “Using Secure Remote Renderer When Upgraded From OES 2015 SP1 or Earlier Versions” on page 66.

- “iPrint Advanced Server” on page 62
- “Windows Machine” on page 63

iPrint Advanced Server

- "Prerequisites" on page 62
- "Secure/ Non-Secure Communications With iPrint Server" on page 62
- "Secure Communication Mode" on page 63

Prerequisites

- At least one printer driver is uploaded to the Driver Store for the Windows platform on which you are setting up the renderer. This is required because when you add a remote renderer from the iPrint Console, you must designate one driver as the default driver for the renderer.

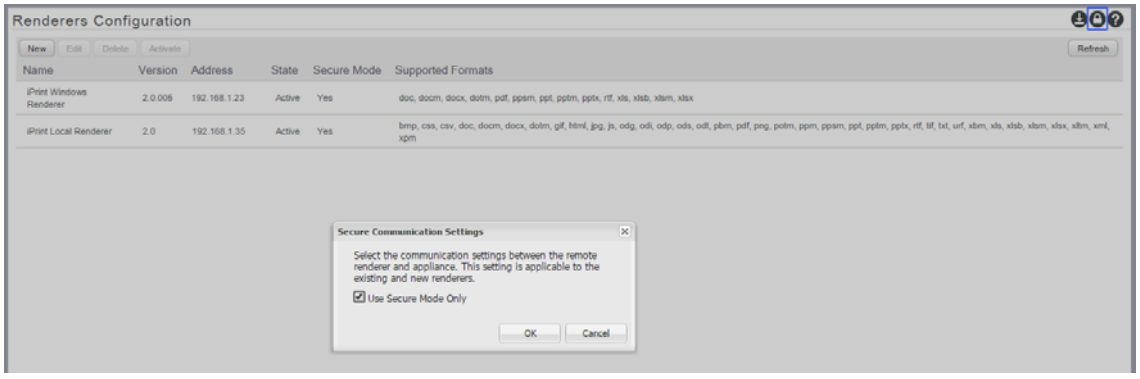
  NOTE: It is recommended that you upload a universal printer driver such as HPUPD, and set that as the default driver.

Secure/ Non-Secure Communications With iPrint Server

The remote renderer communicates over both secure and non-secure channels with the iPrint Advanced server. By default, the iPrint Advanced server is set to communicate in non-secure modes. To modify the communication channel, do the following:

1. On a web browser, specify either the host name or the IP address of `iPrint Advanced` server and in case of cluster setup, specify the resource IP. For example, https://iprintadvanced.example.com/ipcon or https://10.0.0.1/ipcon.
2. Specify the name and password of the OES administrator who has rights to manage the print manager.
3. Under **Administration**, click **Renderers**. All the available renderers are displayed.
4. Click the **Secure settings for renderers** icon. This setting impacts all the renderers displayed on this page.

   The Secure Communication Settings window is displayed.



5 **Secure Communication:** If you have configured the Remote Renderer to secure mode in Step 4a on page 65, then select the **Use Secure Mode Only** check box and click **OK**. The iPrint Advanced server will now accept only secure communications. The non-secure renderers will fail to communicate with the server and no jobs can be rendered by those renderers.

or

Non-Secure Communication: Deselect the **Use Secure Mode Only** check box, then click **OK**. The iPrint Advanced server will now accept both secure and non-secure communications from the renderers.

Secure Communication Mode

The iPrint Advanced server accepts both secure and non-secure communication.To set only secure communication mode, you must ensure that the renderer is secure and the iPrint Advanced server accepts only secure communications. Do the following:

1 On the OES server, generate the `.pfx` file - "Generating PFX File" on page 63.

2 Install and configure Remote Renderer - "Installing and Configuring the Remote Renderer" on page 65.

3 Additional steps to accept secure communication between iPrint Advanced and Remote Renderer - "Secure/ Non-Secure Communications With iPrint Server" on page 62.

Generating PFX File

1 On to the OES server, run `sh /opt/novell/iprintmobile/bin/certman_oes.sh -c` to generate the CSR file. This generates a `iprint_renderer_cert.csr` file in the `/etc/opt/novell/iprintmobile/conf/certs` folder.

2 Copy the `iprint_renderer_cert.csr` file to a iManager workstation.

3 On the iManager workstation, generate the digital certificate using the `.csr` file and eDirectory.

- **3a** In iManager, go to **NetIQ Certificate Server > Issue Certificate**, select the `iprint_renderer_cert.csr` file, then click **Next**.
- **3b** Under **Key type**, select the option **SSL or TLS**. Under **Extended key usage**, select the options **Server authentication** and **User authentication**, then click **Next**.
- **3c** Under **Certificate Type**, select the option **End Entity**, then click **Next**.
- **3d** In the remaining screens, click **Next** and continue with the default options. Verify the certificate and click **Finish**.
- **3e** To download the `iprint_renderer_cert.der` file, click **Download the issued certificate**.

4 Copy the `iprint_renderer_cert.der` file in the `/etc/opt/novell/iprintmobile/conf/certs` folder.

5 Run `sh /opt/novell/iprintmobile/bin/certman_oes.sh -g` to generate the PFX file. This generates a `iprint_renderer_cert.pfx` file in the `/etc/opt/novell/iprintmobile/conf/certs` folder.

Windows Machine

- "Prerequisites" on page 64
- "Downloading the Remote Renderer" on page 64

- “Installing and Configuring the Remote Renderer” on page 65
- “Registering the Remote Renderer” on page 65

Prerequisites

You must assign **Log on as a service** rights to the account with which you want to set up the renderer.

Assigning Log On as a Service Rights

1. On your Windows computer, click **Start > Control Panel**.
2. In the upper-right corner of the Control Panel window, click the **View by** drop-down menu, then select **Large icons**.
3. Go to **Administrative Tools > Local Security Policy**.
4. In the left pane, double-click **Local Policies**.
5. Click **User Rights Assignment**.
6. In the right pane, under **Policy**, double-click **Log on as a service**.
7. Click **Add User or Group**.
8. Specify the user name in the **Enter the object names to select** box, then click **Check Names**.
9. Click **OK** after the user is displayed.
10. Click **OK**.
11. Click **OK**, then close the Local Security Policy window.

Downloading the Remote Renderer

1. On a web browser, use either the host name or the IP address to access the iPrint Console. For example, https://10.0.0.1/ipcon or https://iprint.example.com/ipcon.
2. Specify the name and password of the OES administrator who has rights to manage the print manager.
3. Under **Administration**, click **Renderers**.
4. Click the icon in the upper-right corner of the screen.

NOTE: The remote renderer installation interface is not available in Slovak, Hungarian, Netherlands Dutch, or Catalan languages

A zip file named `iPrintRendererBundle.zip` is downloaded. This zip file contains a `setup.exe` file, `iPrintRendererSetup.msi` file, `ReadMe.txt`, and a `.pfx` certificate file.

Continue with installing and configuring the remote renderer.

Installing and Configuring the Remote Renderer

1. Unzip the `iPrintRendererBundle.zip` file, then launch the `setup.exe` file. Follow the on-screen prompts to complete the installation procedure.
2. When the installation is complete, launch the command prompt in the **Run as administrator** mode.
3. Run the command `iPrntRendCmd -c` to configure the remote renderer.
   - **3a** If you want to configure the remote renderer over a secure channel, copy the `.pfx` file into the `C:\NDPS\Renderer\certificates\` folder. The `.pfx` file is generated on the OES server - "Generating PFX File" on page 63.
4. When prompted for **Do you want to configure the remote renderer over secure channel**, depending on your requirement, specify **Yes** or **No**.
   - **4a** When you specify **Yes**, the renderer is configured in a secure mode. You should perform additional steps for the iPrint Advanced server to accept only secure communications. For more information, see "Secure/ Non-Secure Communications With iPrint Server" on page 62.
   - **4b** When you specify **No**, the renderer is configured in a non-secure mode. You need to perform additional steps to ensure that iPrint Advanced server accepts non-secure communications. For more information, see "Secure/ Non-Secure Communications With iPrint Server" on page 62.
5. When prompted for credentials, specify your credentials.

On successfull configuration, you must register the Remote Renderer.

Registering the Remote Renderer

1. In the iPrint Console, under **Administration**, click **Renderers**.
2. Click **New**.
3. In the **Renderer Host/IP address** box, specify the hostname or IP address of the renderer system, then click **Connect**.
4. Under Options, specify a name for the renderer in the **Renderer Name** box.
5. Select the document formats you want the remote renderer to render.
6. Choose the **Default Printer Driver**, then click **Register**.

After you click the **Register** button, a success message is displayed, but the remote renderer is still configuring. The iPrint Advanced server time depends on the number of unique drivers associated with mobile enabled printers. During that period, the renderer is in the **Configuring** state. After the registration is complete, the renderer changes to the **Active** state. When the status of the remote renderer displays **Active**, it means that the registration is successful. Refresh the page after a couple of minutes to check the status.

Using Secure Remote Renderer When Upgraded From OES 2015 SP1 or Earlier Versions

Perform the following steps:

1 Log on to iManager with the admin privileges.

2 **Update the CRL object “One” to include the default CRL distribution points:**

2a Click **Roles and Tasks** > **NetIQ Certificate Server** > **Configure Certificate Authority**.

2b Click **CRL**, then **One**.

2c Under **CRL Distribution Points**, click **Add defaults**.

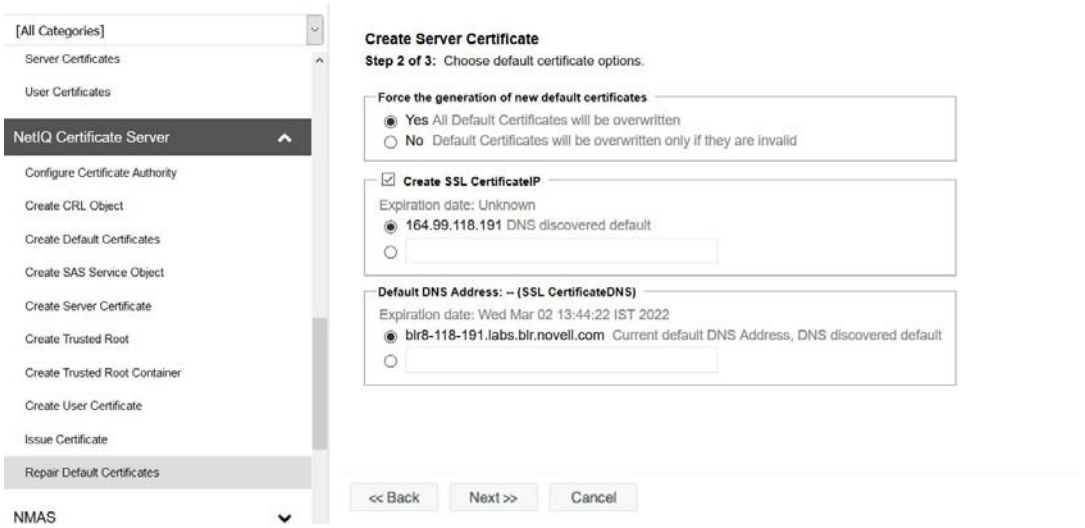
2d Click **OK**.

3 **Repair Default Certificates:** To add teh CRL distribution point in the server certificate

3a Click **Roles and Tasks** > **NetIQ Certificate Server** > **Repair Default Certificates**.

3b Select the server to repair the server, then click **Next**.

3c In **Choose default certificate options**, select the following options:


[All Categories]
Server Certificates
User Certificates
NetIQ Certificate Server
Configure Certificate Authority
Create CRL Object
Create Default Certificates
Create SAS Service Object
Create Server Certificate
Create Trusted Root
Create Trusted Root Container
Create User Certificate
Issue Certificate
Repair Default Certificates
NMAS
Create Server Certificate
Step 2 of 3: Choose default certificate options.
Force the generation of new default certificates
Yes All Default Certificates will be overwritten
No Default Certificates will be overwritten only if they are invalid
Create SSL CertificateIP
Expiration date: Unknown
164.99.118.191 DNS discovered default
Default DNS Address: -- (SSL CertificateDNS)
Expiration date: Wed Mar 02 13:44:22 IST 2022
blr8-118-191.labs.blr.novell.com Current default DNS Address, DNS discovered default
<< Back
Next >>
Cancel

- **Yes All Default Certificates will be overwritten**
- Select **Create SSL CertificateIP**, select the DNS server that is discovered by default
- Under **Default DNS Address**, select the default DNS address.
- Click **Next**.
- Verify the details and click **Finish**.

4 **Restart eDirectory and iPrint Services**

4a (Standalone Server) Restart the following services on a Standalone OES 2018 SP3 server:

- To restart the eDirectory service, run `rcndsd restart`
- To restart the Apache service, run `rcapache2 restart`
- To restart Print Manager, run `rcnovell-ipsmd restart`
- To restart the Mobile server, run `rcnovell-iprint-mobile restart` (for standalone server)

4b (Cluster) Login to the terminal of the node where the cluster pool is running and perform the following steps:

4b1 Restart the following services:

- To restart the eDirectory service, run `rcndsd restart`
- To restart the Apache service, run `rcapache2 restart`
- To restart Print Manager, run `rcnovell-ipsmd restart`

4b2 To recreate the certificate and keystore for the mobile server, run the command:

```
sh /opt/novell/iprintmobile/bin/yast_mobile_config.sh -c
```

4b3 Move the cluster pool to another node.

4c Perform steps in Step 4b on all the cluster nodes.

4d After successfully performing Step 4c, restart mobile service as follows:

```
rcnovell-iprint-mobile restart
```

Proceed with "Deploying a Remote Renderer" on page 61.

Managing the Remote Renderer

The management of remote renderer is supported from the Management Console. You can additionally, use the command line interface by launching the command prompt in the **Run as administrator** mode and executing the `iPrntRendCmd` command.

On the Renderers page, you can perform the following actions:

- "Add a Renderer" on page 67
- "Edit a Renderer" on page 68
- "Delete a Renderer" on page 68
- "Activate or Deactivate a Renderer" on page 68

Add a Renderer

1. Under **Administration**, click **Renderers**.
2. Click **New**.
3. In the **Renderer Host/IP address** box, specify the host name or IP address of the renderer system, then click **Connect**.
4. Under Options, specify a name for the renderer in the **Renderer Name** box.
5. Select the document formats you want the remote renderer to render.

NOTE: The **Build-in PDF renderer** is selected by default. If you want to use Adobe Acrobat, you must ensure that Adobe Acrobat Pro is installed on the renderer machine before selecting the **Adobe Acrobat** option. Similarly, if you want to enable the remote renderer to render Microsoft Office formats, you must ensure that Microsoft Office is installed on the renderer machine before selecting the **Office Support** option.

---

6. Choose the **Default Printer Driver**, then click **Register**.

Edit a Renderer

You can change a remote renderer's name, the document rendering options, and the default printer driver using the **Edit** feature on the Renderers page.

1. Under Administration, click **Renderers**.
2. Select a renderer which you want to edit, then click **Edit**.
3. Modify the details, then click **Commit**.

Delete a Renderer

1. Under Administration, click **Renderers**.
2. Select a renderer that you want to delete, then click **Delete**.

Deleting a renderer unregisters the renderer from the iPrint Advanced server.

Activate or Deactivate a Renderer

1. Under Administration, click **Renderers**.
2. Select a renderer that you want to activate, then click **Activate**.

   The renderer is now in an active state.

If the renderer is in an Inactive state, it will not render any jobs. Deactivating a renderer does not unregister the renderer from the server.

8 iPrint Advanced on Client Workstations

This section describes how to install iPrint Client and printers on your workstation by using iPrint Portal. When a printer is selected for installation, iPrint verifies if the iPrint Client is installed and then installs it if necessary. If iPrint Client is already installed, the printer driver is downloaded and the printer is installed on your workstation.

You can distribute the client to user's workstations in a variety of ways. Refer to the Installing and Setting Up iPrint on Client Workstations in the iPrint Administration Guide.

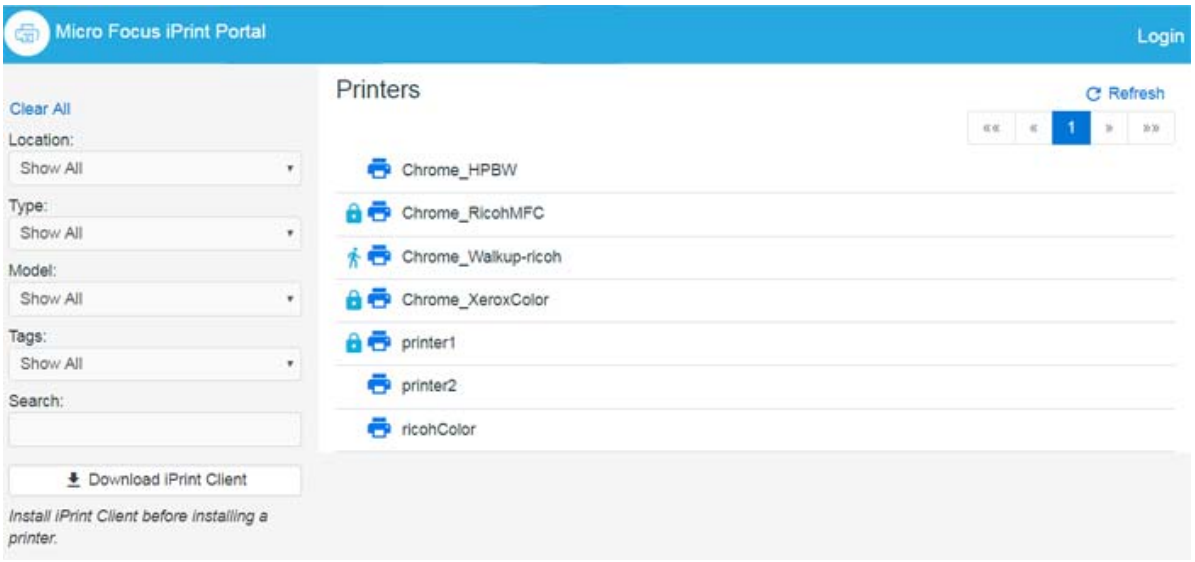
Installing the iPrint Client

You can use iPrint Client to install the printers on your workstation. The client is located in the `/var/opt/novell/iprint/htdocs` directory.

iPrint Portal

To access iPrint Portal, specify **https://<iPrint_Advanced_IP_or_hostname>/print** in the web browser. To download iPrint client, click **Download iPrint Client**.

Figure 8-1 *iPrint Portal*



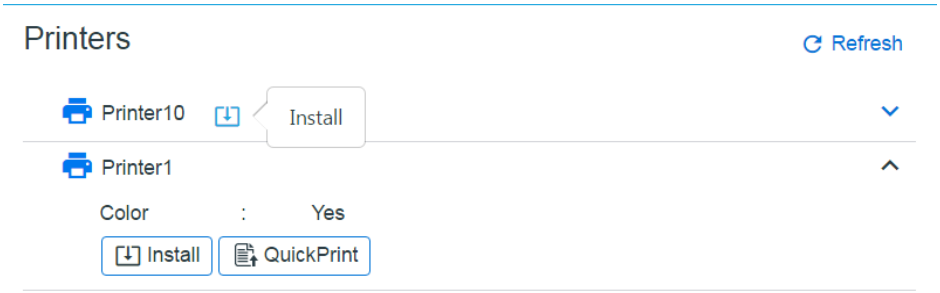
iPrint Portal: Installing Printers

A new printer portal with intuitive GUI that includes QuickPrint functionality, search and quick access (bookmark) to printers based on filters.

To access iPrint Portal, specify **https://<iPrint_for_OES IP or hostname>/print**

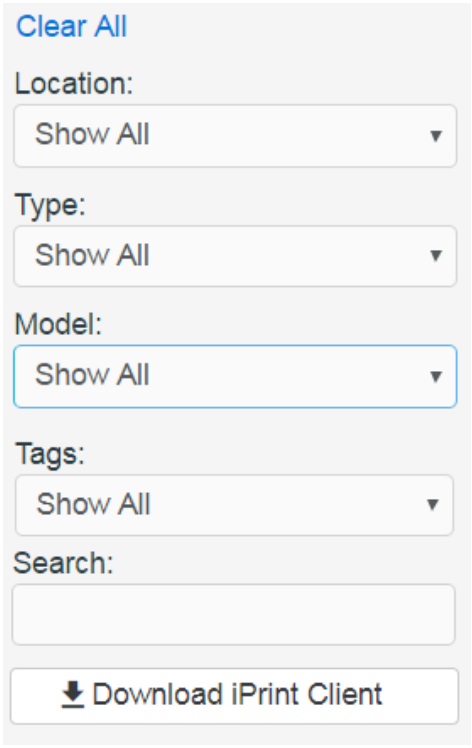
Installing a Printer: To install a printer, hover the cursor on the printer and click . You can also expand a printer to view the printer properties and then click **Install**. The installation of secure and WalkUp printers is controlled through ACLs set for that user.

Figure 8-2 *iPrint Portal Printer Installation*



Quick Access (bookmark) Printers: Printers can now be filtered on location, type, model, and tags. You can also filter with the **Search** field, just type description or any such printer details. The browser url can be bookmarked and shared.

Figure 8-3 *Filter Printers*



iPrint Portal: QuickPrint

QuickPrint is printing documents via a Web browser. iPrint service renders and coverts the document into a print-ready format using the renderer, hence, no drivers are required to be associated with the printer.

Using any web browser, the user selects a printer and document, then prints. The QuickPrint feature is controlled through ACLs set for that user.

To print using web browser, do the following:

1. Launch the iPrint Portal (**https://<iprintforoes_IP or hostname>/print**).
2. Expand a printer and click **QuickPrint** or select the **QuickPrint** icon next to a printer.

Figure 8-4 *Expand Printer to View QuickPrint*

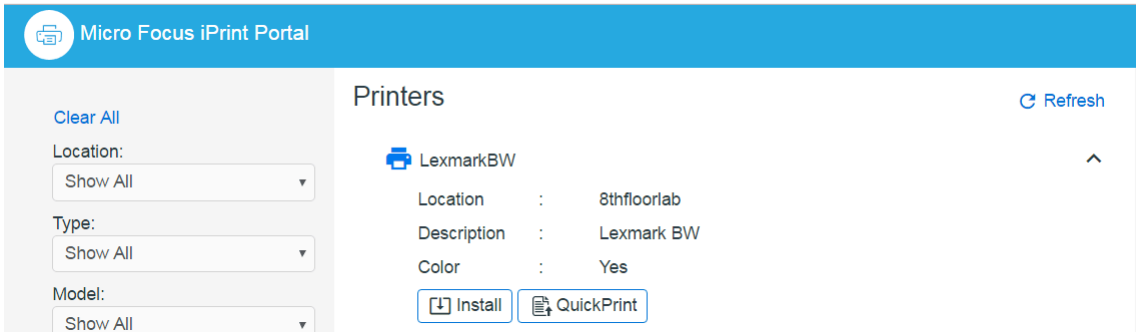
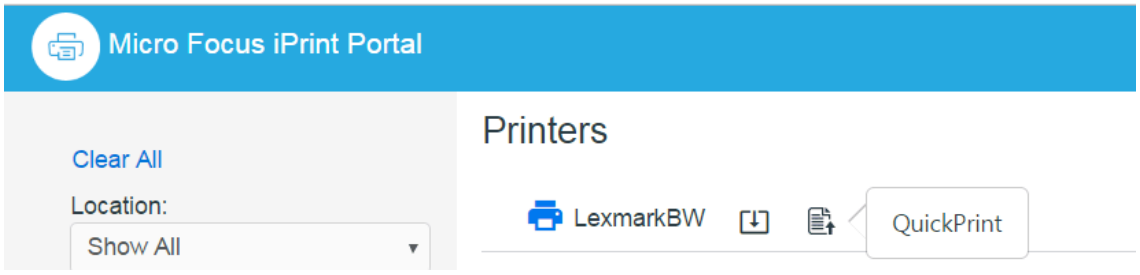
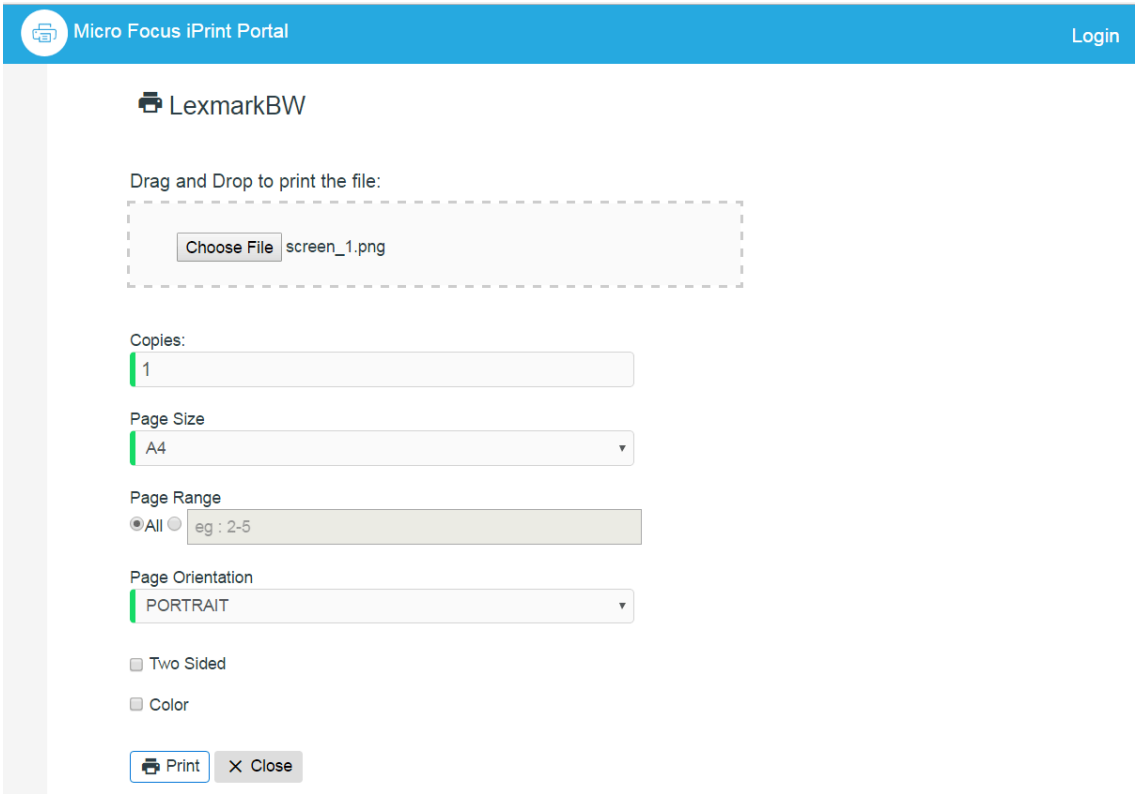


Figure 8-5 *QuickPrint Adjacent to a Printer*



3 Select a file, modify the printer options and click **Print**.

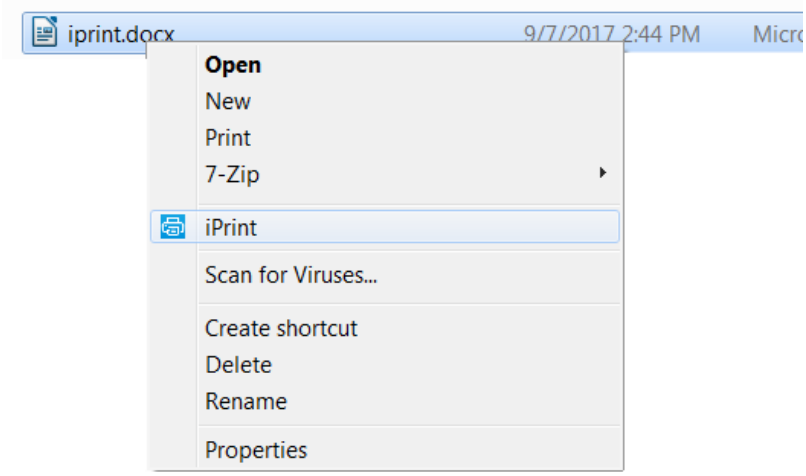


Windows: Context Menu-based Desktop Printing

iPrint is now available as a context menu option on Windows. To print from the Context menu do the following:

1 Right-click a file or files, then select iPrint, an iPrint dialog is displayed.

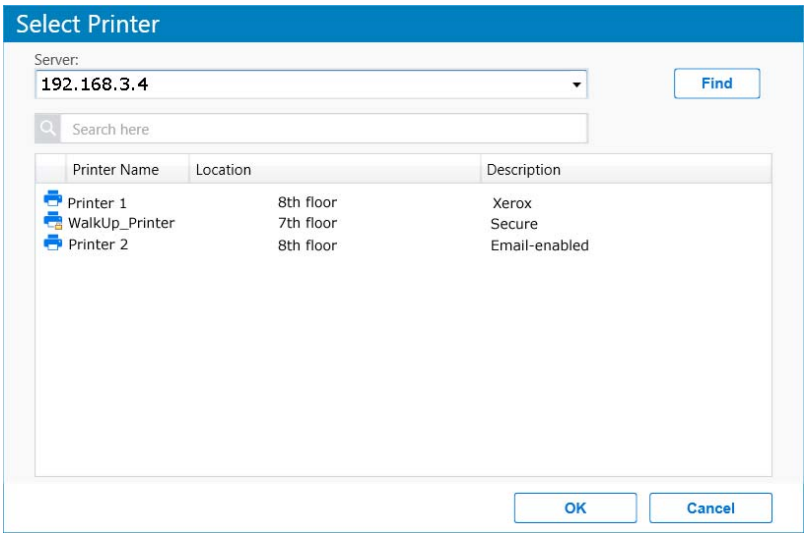
You can print without opening a document. For example, if you received a document in an email, and no application is available to view it, you can still print with the context menu option.



2 Click **Select a printer**.

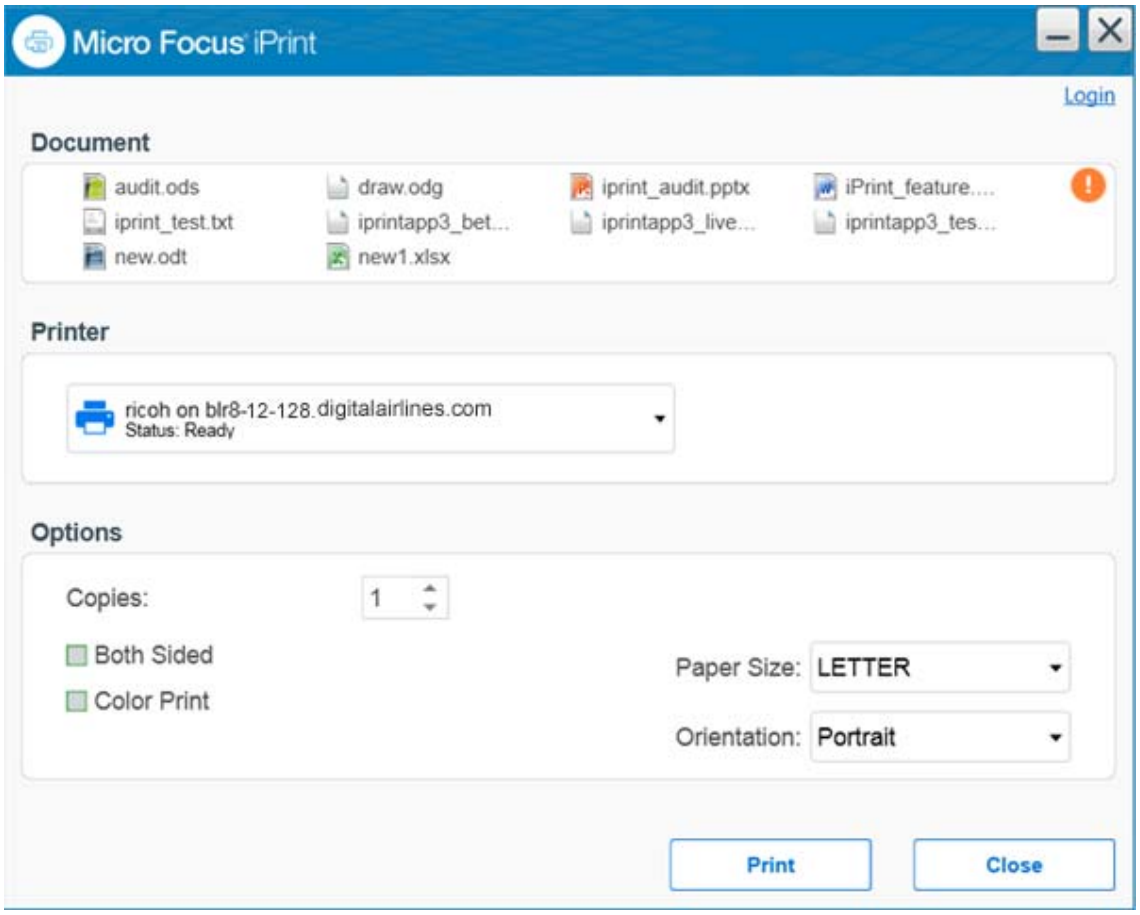
2a The recently used printers are populated in the drop-down menu of **Printer**. Select a previously used printer or Click **Choose printer** to select a different printer.

2b Specify an iPrint server and click **Find**.



For secure or a WalkUp printer, you must login to the server. On logging in, printers are displayed through ACLs set for that user. You can login using only the username or in a LDAP format (comma separated).

3 Click **Print**. The documents are successfully printed.



The **Options** displayed are set in the **Mobile > Global Settings** page of the Management Console. The values can be changed as per your printing requirements.

NOTE: If some file formats are not supported for printing, the file will not be listed for printing.

The info icon lists the unsupported files.

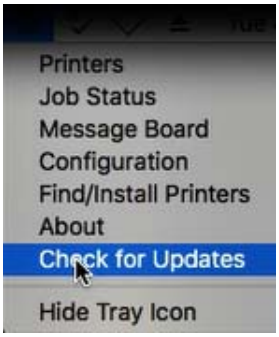
To see the list of supported file formats, see TID 7022058.

MAC: Automatic Update Notification

When the MAC workstation boots up, iPrint checks the default printer to ensure that the workstation is using the latest iPrint Client. If necessary, a notification is launched to update the newer client.

On clicking **Update**, the client is downloaded and the installer is launched to update the client. The user can click **Later** five times after which the iPrint Client is forcefully downloaded on the workstation and client installer is launched.

If the notifications are disabled on the client workstations, then the user can click the **Check for Updates** option from the tray menu.



9 Mobile Device Management (MDM)

- "Managing the iPrint App with ZENworks Configuration Management 2017" on page 77
- "Managing the iPrint App with ZENworks Mobile Management 3.2.x" on page 78
- "Configuring MobileIron to Manage the iPrint App" on page 79

Managing the iPrint App with ZENworks Configuration Management 2017

The Micro Focus iOS iPrint App 3.0.4 available in the Apple Play Store is enabled for ZENworks Configuration Management 2017. For information about provisioning iPrint iOS app, see Provisioning Applications in the ZENworks 2017 Mobile Management Reference guide.

Key-Value Pairs

Key-value pairs allow you to populate user login information and set configuration options.

Table 9-1 *iPrint Key-Value Pairs*

Key	Value
`server`	Specify the URL of your iPrint site. For example, iprint.acme.com.
`server1`	When specifying multiple servers, the subsequent servers will be `server2`, `server3`, and so forth. You can provide same or different user for each server.
`username`	Specify ${LoginName} for ZENworks to automatically populate the app with the login name of the ZENworks user. Alternatively, you can specify name of an individual user.
`configLocked`	The value is true or false. If the value is true, the app users will not be able to modify the iPrint app configuration on their devices. This value of the data type must be string and not boolean.

Examples for Key-Value Pairs

- **Multiple Servers and Same Users:** If there are two iPrint servers and you want all the app users to print through both the servers, specify the server values and `username` as the key.

Table 9-2 *Multiple Servers and Same Users*

Key	Value
`server`	iprint.acme.com
`server1`	iprint2.acme.com
`username`	`${LoginName}`

- **Multiple Servers and Different Users:** If there are two iPrint servers and you want different set of app users to print through each server, specify the server values and subsequent `username` as the key. Use the key-value pair as `server` and `username` and `server2` and `username2`.

Table 9-3 *Multiple Servers and Different Users*

Key	Value
`server`	iprint.acme.com
`username`	admin
`server1`	iprint1.acme.com
`username1`	admin1

- **Sample Format of Configuration File**

```
<key>Configuration</key>
<dict>
     <key>server</key>
     <string>iprint.acme.com</string>
     <key>server1</key>
     <string>iprint1.acme.com</string>
     <key>username</key>
     <string>admin</string>
     <key>username1</key>
     <string>admin1</string>
     <key>configLocked</key>
     <string>true</string>
</dict>
```

Managing the iPrint App with ZENworks Mobile Management 3.2.x

ZENworks Mobile Management (ZMM) 3.2.x is a mobile device management solution that provides organizations with centralized management and control of the wireless device platforms in their enterprise network.

The Micro Focus iPrint App available in the Google Play Store is enabled for ZMM. You can now manage the Micro Focus iPrint app using ZMM solution. For information about adding iPrint app for Android devices, see Adding and Managing Apps for Android Devices in the Managing User, Resources, and Applications guide.

Configuring MobileIron to Manage the iPrint App

iPrint App is enabled for MobileIron. You must configure MobileIron to manage the iPrint mobile app.

- "Supported Features" on page 79
- "Adding the iPrint App to MobileIron" on page 79
- "Pre-Populating Fields for iPrint Login" on page 81
- "Distributing the iPrint App to Devices" on page 83

Supported Features

iPrint mobile app provides an additional feature to pre-populate the following fields on the iPrint login screen on both iOS and Android devices:

- **Server IP Address**
- **User ID**

Adding the iPrint App to MobileIron

- "Adding the Android iPrint App" on page 79
- "Adding the iOS iPrint App" on page 80

Adding the Android iPrint App

To add the Android iPrint app to MobileIron, upload the `*.apk` file and then apply the Android label to the application:

1. Download the Micro Focus iPrint for MobileIron Appconnect (`*.apk`) file from the Novell downloads site (https://download.novell.com).
2. Upload the file to MobileIron:
   - **2a** In the MobileIron Admin Portal, click the **Apps** tab.
   - **2b** On the **App Distribution Library** tab, in the **Select Platform** drop-down list, select **Android**.
   - **2c** Click **Add App**.

     The Add App Wizard is displayed.
   - **2d** Click **Next**, then specify the following information:

     Distribution Type: Select **In-house App**.

     Silently Install: If your device supports a silent install, select **Yes**. If the device does not support a silent install or if you are unsure, select **No**.

     App Upload: Browse to and select the `.apk` file that you downloaded.
   - **2e** Click **Next**, then specify the following information:

     App Name: `Micro Focus iPrint` is already specified for you. This cannot be changed.

     Display Version: The version is already specified for you. This cannot be changed.

     Code Version: The version is already specified for you. This cannot be changed.

Description: Specify a short description for the app.

Override URL: For information about this feature, see the blue information icon next to this field.

Featured: Select whether you want to feature this app.

Category: Select the category that most closely matches the app. You can add a new category as described in the dialog box.

2f (Optional) Click Next, then click **Browse** to upload any screen shots that you have for the app.

The mandatory image size is displayed in the dialog box.

2g Click **Finish** to close the Add App Wizard.

3 Apply the Android label to your application:

3a From the **App Distribution Library** tab on the **Apps** tab, select the Micro Focus iPrint app that you created, then click **Actions** > **Apply To Label**.

The Apply To Label dialog box is displayed.

3b Select the **Android** label, then click **Apply** > **OK**.

Adding the iOS iPrint App

To add the iOS iPrint app to MobileIron, import it from the Apple Appstore and then apply the iOS label to the application:

1 Import the app from the Apple Appstore:

1a In the MobileIron Admin Portal, click the **Apps** tab.

1b On the **App Distribution Library** tab, in the **Select Platform** drop-down list, select **iOS**.

1c Click **App Store Import**.

The App Store Search dialog box is displayed.

1d In the **App Name** field, type `Micro Focus iPrint`.

1e In the **App Store** field, select the country appropriate to your location.

1f Click **Search**.

1g Click **Import** next to the Micro Focus iPrint app, then click **OK** after it is imported.

1h Close the App Store Search dialog box.

1i From the **App Distribution Library** tab on the **Apps** tab, click the **Edit** icon next to the Micro Focus iPrint app that you imported.

The Edit App for iOS dialog box is displayed.

1j Make any desired changes to the app details and icon, then click **Save**.

2 Apply the iOS label to your application:

2a From the **App Distribution Library** tab on the **Apps** tab, select the Micro Focus iPrint app that you just created, then click **Actions** > **Apply To Label**.

The Apply To Label dialog box is displayed.

2b Select the **iOS** label, then click **Apply** > **OK**.

Pre-Populating Fields for iPrint Login

Pre-populate the server URL and user ID fields for both the iOS and Android apps.

You must modify the app configuration for Android, and create a new app configuration for iOS.

- "Creating the iOS iPrint App Configuration for MobileIron" on page 81
- "Key-Value Pairs" on page 81
- "Modifying the Android iPrint App Configuration for MobileIron" on page 82

Creating the iOS iPrint App Configuration for MobileIron

1. In the MobileIron Admin Portal, click the **Policies & Configs** tab.
2. On the Configuration tab, click **Add New** > **AppConnect** > **Configuration**.

   The New AppConnect App Configuration dialog box is displayed.
3. Specify the following information:

   Name: Provide a name for the configuration, such as `iPrint iOS Configuration`.

   Description: (Optional) Provide a description for the configuration.

   Application: Specify the iPrint iOS bundle ID, which is `com.novell.print`.
4. In the **App-specific Configurations** section, click the **Plus** icon to add a new field to the key-value pair table; you can then specify the key-value pair to be included in the configuration.

   The key-value pairs that you can add are shown in Table 9-4, "iPrint Key-Value Pairs," on page 81. Key-value pairs that you add to the table represent the information that will be pre-populated for iPrint login.
5. Click **Save**.

Key-Value Pairs

Table 9-4 *iPrint Key-Value Pairs*

Key	Value
`server`	Specify the URL of your iPrint site. For example, iprint.acme.com.
`server2`	When specifying multiple servers, the subsequent servers will be `server2`, `server3`, and so forth. You can provide same or different user for each server.
`user`	Specify $USERID$ for MobileIron to automatically populate the app with the users' MobileIron user ID. Alternatively, you can specify an individual user's user ID.
`configlocked`	The value is true or false. By default, the value is true and the app users will not be able to modify the iPrint app configuration on their devices.

Examples for Key-Value Pairs

- **Multiple Servers and Same Users:** If there are two iPrint servers and you want all the app users to print through both the servers, specify the server values and `user` as the key.

Table 9-5 Multiple Servers and Same Users

Key	Value
server	iprint.acme.com
server2	iprint2.acme.com
user	$USERID$

- **Multiple Servers and Different Users:** If there are two iPrint servers and you want different set of app users to print through each server, specify the server values and subsequent `user` as the key. Use the key-value pair as `server` and `user` and `server2` and `user2`.

Table 9-6 Multiple Servers and Different Users

Key	Value
server	iprint.acme.com
user	$USERID$
server2	iprint2.acme.com
user2	$USERID$

Modifying the Android iPrint App Configuration for MobileIron

1. In the MobileIron Admin Portal, click the **Policies & Configs** tab.
2. On the **Configuration** tab, in the **Name** column, click the name of the iPrint configuration for the iPrint app that you uploaded, as described in "Adding the Android iPrint App" on page 79.
3. Click **Edit**.

   The Modify AppConnect App Configuration dialog is displayed.
4. Specify the following information:

   Name: Provide a name for the configuration, or keep the default.

   Description: (Optional) Provide a description for the configuration, or keep the default.

   Application: Select `Micro Focus iPrint` from the drop-down list.
5. In the **App-specific Configurations** section, keep or remove the key-value pairs that are shown in Table 9-4, "iPrint Key-Value Pairs," on page 81. Key-value pairs that remain in the table represent the information that will be pre-populated for iPrint login.
6. Click **Save**.

Distributing the iPrint App to Devices

You must distribute the iPrint app to devices in your organization via MobileIron if this is the first time your organization is using MobileIron with iPrint, or any time a new device enters the organization.

Some users might have independently download the iPrint app from the app store before their device is managed by MobileIron. Even in this scenario, you must push the app to their device via MobileIron. (These devices will lose any cached or downloaded files within the iPrint app after their device becomes managed and the iPrint app is pushed to their device.)

A Troubleshooting iPrint Advanced

The following are some common troubleshooting issues:

- "Unable to Login to IPCON After Upgrade" on page 85
- "Post Printer Migration, Unable to Login to Mobile App and Access Secure Printers" on page 85
- "Allow Users to Log in to Apps and Portal in the CN Format" on page 86
- "Local Renderer Fails to Print the Password-Protected PDF Files" on page 86
- "Printer Prints Junk Characters" on page 86
- "All Print Jobs Fails Post Configuration" on page 87
- "Email Printing Fails When the Filename Includes Extended Characters Or Double-byte Characters" on page 87
- "Unable to Configure Email Printing When SSL Is Enabled for IMAP/POP on a Mail Server" on page 87
- "Garbage Characters Printed When Printing from Gmail on Internet Explorer" on page 87
- "Caveats" on page 88

Unable to Login to IPCON After Upgrade

In a cluster setup, if you are unable to login to IPCON due to an OrientDB issue, then follow the TID 7024959 to resolve it.

Post Printer Migration, Unable to Login to Mobile App and Access Secure Printers

Post printer migration, logging in to the iPrint mobile app fails. Also, printing to secure printers fails when using iPrint Portal and Context-menu "iPrint" option. To resolve this issue, users can log in to the Mobile apps or secure printers by using the FQDN format (cn=admin,o=microfocus). To enable logging through the CN format, you must modify the trustee rights of the user container:

1. Login to iManager (https://*<IP Address or host name of iPrint Advanced server>*/nps).
2. Under **Roles and Tasks**, click **Rights > Modify Trustees.**
3. Browse and select the user container whose trustee you want to modify.
4. Click **Assigned Rights** link for that trustee.
5. To add the CN property, click **Add Property**, then click **Show all properties in schema** and click **OK**.
6. In **Modify Trustees**, select **Inherit** for CN property, then **Done** and **OK**.

You can successfully login to mobile apps and print through secure printers by using the FQDN format.

Allow Users to Log in to Apps and Portal in the CN Format

Users can log in to the mobile apps, Release Portal, and iPrint Portal only in the FQDN format (cn=admin,o=microfocus). To enable logging through the CN format, you must modify the trustee rights of the user container:

1. Login to iManager (https://*<IP Address or host name of iPrint Advanced server>*/nps).
2. Under **Roles and Tasks**, click **Rights > Modify Trustees.**
3. Browse and select the user container whose trustee you want to modify.
4. Click **Assigned Rights** link for that trustee.
5. To add the CN property, click **Add Property**, then click **Show all properties in schema** and click **OK**.
6. In **Modify Trustees**, select **Inherit** for CN property, then **Done** and **OK**.

Local Renderer Fails to Print the Password-Protected PDF Files

The local renderer fails to print password-protected or corrupt PDF files.

You might get a message in the audit page that the job is complete or success message for email printing, if the local renderer uses the pre-packaged driver for printing.

Printer Prints Junk Characters

When trying to print a document, the printer might print only junk characters in the following scenarios:

- This issue is caused because the local renderer does not support all the font types. To resolve this issue, you can install the Microsoft TrueType fonts on your iPrint server.
  1. Log in as `root`.
  2. Type the following command to navigate to the `fonts` directory, then press Enter:

     ```
     cd /opt/novell/iprintmobile/fonts/
     ```
  3. Install the supported RPM files by typing the following command, then press Enter:

     ```
     rpm -ivh *.rpm
     ```

     The RPM files are now installed on the iPrint server.
  4. Run the script to retrieve the fonts by typing the following command, then press Enter:

     ```
     sh fetchmsttfonts-11.1-5.7.10-fetchmsttfonts.sh.txt
     ```

     The fonts are downloaded from Sourceforge and installed on your iPrint server.
- Few of the Linux drivers might fail to print due to absence of certain filters. You can verify this information, using the command: `lpstat -p`

  The command displays the status of the drivers. Change the driver for which you have received the failure messages. This is applicable only for local renderer.

All Print Jobs Fails Post Configuration

If Driver Store or Print Manager is not running, printing fails.

Execute the following command to list the installed drivers: `lpstat -p.`

If no drivers are listed, then run the following command to install the default driver: `sh /opt/novell/iprintmobile/bin/post_initial_config.sh -u <adminuser> -p <passwd>`

Email Printing Fails When the Filename Includes Extended Characters Or Double-byte Characters

Printing through email fails, if the name of the file includes either extended characters or double-byte characters.

To resolve this issue, rename the file to include only supported characters.

Unable to Configure Email Printing When SSL Is Enabled for IMAP/POP on a Mail Server

If SSL is enabled for IMAP/ POP on a mail server, you might be unable to configure email printing using the iPrint Console.

To work around this issue, you must manually import the mail server certificate into iPrint using the following procedure:

1. On the iPrint Advanced server, execute the following command:

   ```
   keytool -import -alias <alias_name> -keystore /usr/lib64/jvm/jre-1.8.0-ibm/lib/security/cacerts -file <Cert_file_path>
   ```

   Th default password is “changeit”.
2. To accept the certificate, restart the Mobile server:

   rcnovell-iprint-mobile restart

Garbage Characters Printed When Printing from Gmail on Internet Explorer

If you are using Gmail on Internet Explorer and you try to print an email, you might see garbage characters in place of line breaks. This is caused by a character encoding issue.

To work around this issue, you must change the default text encoding to UTF-8 in your Gmail settings.

1. Launch Internet Explorer, then go to www.gmail.com.
2. Sign in to Gmail with your user name and password.
3. Click the settings icon in the upper-right corner of the screen, then select **Settings**.

4 Under **General** settings, in the **Outgoing message encoding** section, select **Use Unicode (UTF-8) encoding for outgoing messages**.

5 Click **Save Changes**.

Caveats

This section discusses the following caveats:

- Users should login to mobile apps, Release Portal, and iPrint Portal in FQDN format (cn=admin,o=microfocus).
- You must restart the mobile server on changing the driver store from local to remote or vice-versa. The command to restart the mobile server is `rcnovell-iprint-mobile restart`.
- If you need to restart Apache and Print Manager, it is recommended to first restart Apache, then the Print Manager.

B iPrint Advanced Support Matrix

This section provides information on the following.

- "Mobile Server Support" on page 89
- "Mobile Operating System Support" on page 89
- "iPrint Console Support" on page 90
- "MobileIron Support" on page 90
- "Remote Renderer" on page 90
- "Supported Document Formats By the Local Renderer and Remote Renderer" on page 91
- "Clients for Email Printing" on page 92

Mobile Server Support

Table B-1 *Moblie Server Support*

Features	Version
Email	◆ GroupWise 18.3.x ◆ Novell GroupWise 2012 ◆ Microsoft Exchange 2013 ◆ Gmail ◆ IBM Domino server 9 ◆ Lotus Notes

Mobile Operating System Support

Table B-2 *Mobile Operating System Support for Apps*

Type	Version
iOS	◆ 15 ◆ 14.x ◆ 13.*x* ◆ 12.*x*

Type	Version
Android	◆ Android 11 (11.x) ◆ Android 10 (10.x) ◆ Pie (9.x) ◆ Oreo (8.x) ◆ Nougat (7.x)
Amazon Kindle	Fire Phone OS 4.6.6.1

iPrint Console Support

Table B-3 *Management Console Support*

Access	Version
Browser	◆ Internet Explorer 11 or later ◆ Firefox 30 or later ◆ Chrome 35 or later ◆ Safari latest on Mac ◆ iOS 10 tablet with default browsers ◆ Android 6.x tablet with default browsers

MobileIron Support

Table B-4 *MobileIron Support*

MobileIron Core Version	iPrint Mobile App Version
9.3	3.0.x mobile app for iOS and Android
8.5	2.0 mobile app for iOS and Android
7.5	1.1 mobile app for iOS and Android

Remote Renderer

- Table B-5, “Operating Systems Support,” on page 91
- Table B-6, “Software Support,” on page 91

Table B-5 *Operating Systems Support*

Support	Version
Operating System	◆ Windows 10 64-bit Enterprise ◆ Windows 8.1 64-bit Enterprise ◆ Windows 7 SP2 64-bit Enterprise ◆ Windows 2016 Standard ◆ Windows 2012 R2 Standard ◆ Windows 2008 R2 64-bit Enterprise ◆ Windows Vista (32-bit and 64-bit)

Table B-6 *Software Support*

Support	Version
Microsoft Office	◆ Ms Office 2016 (64-bit) Standard ◆ Ms Office 2013 (32-bit and 64-bit) Standard
Adobe Acrobat	Adobe Acrobat XI Professional

Supported Document Formats By the Local Renderer and Remote Renderer

Table B-7 *Local Renderer Supported Document Formats*

Software	File Formats
OpenDocument	ODT, ODP, ODG, ODS
Graphics	JPG, BMP, TIF, GIF, PNG
Others	PDF
	TXT
	HTML (Static)
	Static HTML content refers to the HTML content that does not change or have dependencies on external files such as MySQL database and JavaScript.

Table B-8 *Remote Renderer Supported Document Formats*

Software	File Formats
Microsoft Word	DOC, DOCX, DOCM, DOTM, RTF
Microsoft Excel	XLS, XLSX, XLSM, XLSB
Microsoft PowerPoint	PPT, PPTX, PPTM, PPTX
Others	PDF

Clients for Email Printing

- Novell GroupWise 2012 and Novell GroupWise 2014
- Microsoft Outlook 2010
- IBM Lotus Notes 9
- iOS 5, 6. *x*, 7.*x* default mail client
- Mail clients on Android 4.x or later
- Gmail
- Groupwise 18.3.x

C Log Files Location

This section details the location of the iPrint Advanced log files:

Name	Location
Mobile Server	/var/opt/novell/log/iprintmobile/iprint_mobile*.log
iPrint Console	/var/opt/novell/iprint-tomcat/logs/catalina*.log
iPrint auth log	/var/opt/novell/log/iprintauth/iprint-auth.log
License Server	/var/opt/novell/log/iprintlicense/license*.log
OCS	/var/opt/novell/log/iprintgmt/iprintocs*.log

D Advanced Configuration for iPrint Mobile Service (Optional)

In addition to the Management Console, there are a few additional parameters that can be configured to fine-tune the iPrint service, based on your network and printing requirements. The iPrint Server Configuration file, located at `/etc/opt/novell/iprintmobile/conf/iprintmobile.conf`, allows you to customize the iPrint Mobile service per your requirements.

You must configure the `iprintmobile.conf` file manually. When assigning a value to any parameter, ensure that you uncomment the line, in order for the changes to take effect.

IMPORTANT: After configuring the file, you must restart the iPrint Mobile service through the Management Console.

The advanced configuration is optional. For most environments, the configuration does not require modifications.

The iPrint Advanced server configuration file contains the following information:

Table D-1 *Server Configuration File Contents*

Parameter	Default Value	Function
home_directory	/var/opt/novell/iprintmobile	A directory on the file system that is used to store the data. This folder contains the service metadata and temporary job data.
conversion_wait_time	300	Duration of time (in seconds) that the job submission threads wait for the job conversion threads.
db_backup_interval	10000	Duration (in milliseconds) after which the database is backed up on the disk.
is_test_setup	false	Set this flag if the server is being set up for testing and no dedicated email address is available. Print job requests are read-only from the Cabinet folder.
job_submission_thread_timeout	60	Duration (in seconds) for which an excess idle thread waits before terminating.

Parameter	Default Value	Function
delete_completed_job_data	true	Deletes the converted email print job data stored at `/var/opt/novell/iprintmobile/jobs/`. Set the value to *false* to retain the converted job data for email print jobs. The /var/opt/novell/iprintmobile/jobs/ folder does not maintain the IPP job data. IPP job data includes job data from the Novell iPrint app. The job data for apps are stored in the PA spool directory of the Print Manager. **WARNING:** If you set the value to *false*, you must ensure that you delete the print job data regularly to free up disc space. If the disk space gets full, then email print jobs are not processed.
fallback_to_local_converter	false	If the remote renderer fails, you can run the job through a local converter.
num_email_receiver_threads	0	Configure this parameter to the maximum number of threads to be used for processing multiple mailboxes. By default (when set to 0), the number of threads to email addresses ratio is 1:5 (1 thread per 5 email addresses).
use_global_address_for_notifications	false	By default, notifications are sent from the printer-specific email address. Change the value to 'true' if you want to send notifications to users using the global email address.
renderer_time_out	180000	Duration (in milliseconds) after which a registered renderer times out and moves to an inactive state.
verify_certificates	false	Disable certificate validation.
renderingOnlyServiceEnabled	true	RenderOnly Configuration
backendRenderingPollingInterval	500	Backend Rendering Polling Interval (in milliseconds)
email_polling_interval	30000	Configures the interval (in milliseconds) at which emails are fetched from mail servers.
subject_optional_for_printer_specific_emails	true	Stops printing emails without the correct iPrint email print command. By default this value is 'true.' Emails forwarded to the printer-specific email address, with or without a subject line, are printed.
email_reconnect_interval	30	If the email server is unavailable, iPrint Advanced tries to reconnect to the email server after the specified duration (in seconds).
stellent_conversion_thread_count	5	Number of threads allocated for job conversion.
pdf_conversion_thread_count	10	Number of threads allocated to PDF job conversion.
convert_stellent_pdf_using_external_renderer	true	If this is set to false the PDF job data is not send to the remote renderer, even if the remote renderer is configured and active.

Parameter	Default Value	Function
enable_client_login	false	By default this value is ‘false’. Set this value to ‘true’ if you require user authentication in apps for printer-based license.
driver_update_interval	60	Duration (in minutes) after which driver update is triggered.
default_network_interface	eth0	Change the default value, if you have configured multiple NIC cards configured.
direct_pdf_print	-	Add and set this value to ‘true’ to enable direct pdf printing. If this parameter is not added or set to ‘false’, then the printing is done in the earlier way where the jobs are rendered by the Renderer.
proxy_server_hostname	-	Add and specify the value as IP address or host name along with port number. Whenever a user adds the proxy configured iPrint server in the iPrint mobile app, it will automatically get configured with the Proxy server. All the requests of the mobile app users will be redirected to the iPrint server thru the proxy server. For example, http://proxy.mycompany.com:8080